



# Philosophy of Military Sciences

Anders McDonald Sookermany

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## Abstract

This chapter systematically explores the philosophical underpinnings of Military Sciences, integrating ontology, epistemology, teleology, and methodology as

A. M. Sookermany (✉)  
Command and Staff College, Norwegian Defence University College, Oslo, Norway  
e-mail: [asookermany@mil.no](mailto:asookermany@mil.no)

philosophical concepts to enrich the theoretical and practical understanding of the field. The search begins by looking into the essence and existence of that which we take to be military entities, actions, or ideas (the ontological perspective). Then it goes on to explore the nature of military knowledge, how it is justified, what are its sources, and its scope (the epistemological perspective). The exploration then progresses to address the deeper purposes and ends of military endeavors so as to better recognize and contemplate the influence of the military's continuous evolving roles and objectives on its research (the teleological perspective). Thereafter, the chapter probes the pursuit of military knowledge as a constantly ongoing dialogue between the researcher, the phenomenon, and the theoretical frameworks (the methodological perspective). The exploration ends with a reflection on some of the implications these examinations call for in the field of Military Sciences. In sum, the presentation brings visibility to the study of the Military as a complex and ever-evolving enterprise, honoring its multidisciplinary mode.

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**Keywords**

Philosophy of Military Sciences · Ontology · Epistemology · Teleology · Methodology

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**Introduction**

An informed philosophy of science serves as a compass, guiding scholars through the intricate terrain of foundational assumptions that shape their inquiry (Ladyman 2002). Within the multifaceted field of Military Sciences (Sookermany 2024), a skillfully employed Philosophy of Military Sciences makes visible the core ideas and structures from which conceptual frameworks emerge. It not only provides a philosophical rationale for the field's existence but also engages in an ongoing critique of its concepts, practices, and assumptions. This dual role is pivotal for refining the capability to describe, comprehend, and articulate the complex realities of the military realm (Gorton 2010).

The pursuit of a Philosophy of Military Sciences is not merely academic; it has real implications for the efficacy of military entities, actions, and mindset. By exploring the philosophical roots of our understanding, scholars and practitioners are expected to be better equipped to navigate the complexity of military engagement and the evolving nature of warfare (Freedman 2017; Gray 2005). In accordance, such a pursuit cultivates a critical, reflective, and reflexive mindset, essential for adapting to the rapid technological and societal changes impacting the military landscape (Biddle 2004; Chris Paparone 2012). In an effort to inspire more nuanced philosophical inquiry within the field of Military Sciences, this chapter aspires to open a pathway to innovative thought, anchoring it in a tradition of rigorous, critical analysis (Sookermany 2024; Walzer 2015).

Accordingly, the chapter is structured to systematically unfold the philosophical dimension of Military Sciences. At first, it delves into **ontology**, questioning the philosophical underpinnings/essence and existence of military entities, practices, and concepts. Thereafter, this foundation paves the way to **epistemology**, scrutinizing the acquisition, validation, and application of knowledge within this sphere. Then through the perspective of **teleology** the intended purposes and ends of military efforts are explored. And finally, the main body of this chapter culminates in a critical examination of **methodology** as a lens for engaging with and advancing Military Sciences. Together, these different discussions weave a comprehensive tapestry, showcasing how philosophy is not just abstract theory but a practical toolkit for enhancing the field's intellectual and operational rigor.

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## What Is This Thing We Call Military: The Ontological Perspective?

Ontology, originating from the Greek words “ontos” (being) and “logia” (study), is a core branch of philosophy focused on the nature of being, existence, and reality (Effingham 2013). Philosophically it delves into the essence of what it means for something to exist. More profoundly, “ontology” helps us to recognize the deeper (layers of) meaning of that which we are talking about. Hence, from a Military Sciences perspective, an ontological inquiry digs into the basic nature of the military entities, actions, and ideas we are to make sense of. In consequence, it brings visibility and insight to its constitutive parts and how they work.

Therefore, Ontology, within Military Sciences, moves us beyond seeing the military merely as an institution or set of practices. Rather, it encourages us to delve into the philosophical underpinnings that shape the way the military or parts of it is understood, interpreted, or practiced. In a broader sense, they are the philosophical roots that influence how theories are developed, how research is conducted, or how phenomena are explained. An exploration into these ontological foundations reveals a nuanced diversity within philosophical studies, where distinct schools of thought—Analytical and Continental Philosophy—offer varied lenses through which the military can be examined (Beane 2013; Critchley 2001; Jones 2009).

Analytical philosophy, which is rooted in Anglo-American thought and draws on logic and natural sciences, puts emphasis on clarity, logic, and precision (Beane 2013). This school often employs a methodological approach based in formal logic and linguistic analysis centered around abstract entities, properties, and structures of the world. Accordingly, their ontological analysis is characterized by precision and formalism, often using tools of logic and mathematics. For instance, John Searle's analysis of social reality through speech acts illustrates how analytical philosophy uses formal logic to understand how language facilitates the formation of societal structures. Accordingly, what exists is constructed and comprehended through linguistic interaction and agreements (Searle 1995). On the other hand, continental philosophy, emerging primarily from European traditions including existentialism, phenomenology, and critical theory, embraces a more narrative, critical, and

interpretive approach (Critchley 2001). Methodologically this school tends to focus on human experience and existential questions as bases for their elaborations, thus delving into the human condition, historical and cultural contexts, and existential aspects of being. In ontological description, this school becomes more metaphorical and speculative, aiming to capture depth and complexity of human existence. To illustrate, Martin Heidegger's exploration of "Being" from the perspective of being-in-the-world highlights how continental philosophy seeks to grasp human existence as an intricate interaction with our temporal and spatial surroundings. Thus, what exist is understood through an individual's lived experiences with their surroundings (Heidegger 1962).

Consequently, in the context of Military Sciences, philosophical underpinnings inform the study of military phenomena in distinct ways. The analytical philosophy's emphasis on clarity and rigor is observable in the likes of Jomini's systematic principles of warfare, Mahan's strategic focus on naval power for national supremacy, or Huntington's delineation of civil–military relations. In contrast, the narrative depth and critical examination typical of continental philosophy arguably emerge in Clausewitz's exploration of war's existential complexities, Corbett's holistic view of naval strategy within broader societal contexts, and Janowitz's exploration of the military's societal integration. This diversity underscores that our understanding of military entities, actions, and ideas is profoundly influenced by the philosophical lenses we employ. Thus, embracing both the precision of analytical philosophy and the depth of continental thought offers a comprehensive framework for grasping the multifaceted nature of the military from a military sciences perspective.

To further underscore the significance of ontology within this field, the subsequent subsections will delve into three illustrative case studies. These examples not only highlight ontology's critical role in enriching our academic and practical understanding of military sciences but also illuminate the thematic issues discussed throughout the *Handbook of Military Sciences*. Through these cases, we aim to demonstrate the value, relevance, and utility of ontological inquiry for both scholarly exploration and practical application in military contexts.

## **How Historical and Conceptual Evolution Shape Ontology: The Nature and Essence of War Case**

In exploring the historical and conceptual evolution of military thought, the perspectives of Carl von Clausewitz and Baron Antoine-Henri Jomini provide rich case studies for ontological inquiry. Bearing in mind that both of them preceded the formal division of philosophy into analytical and continental strands, their theories can still be meaningfully interpreted through these lenses. Clausewitz, often read through a continental lens, presents war as an inherently complex and uncertain phenomenon, deeply intertwined with political, social, and moral dimensions (Clausewitz et al. 1984). His view, emphasizing the "fog of war" and the psychological aspects of conflict, suggests that war's essence cannot be fully captured by rigid principles or formulas. Instead, it requires a nuanced understanding of its fluid



dynamics and existential underpinnings, resonating with the continental philosophical focus on the holistic and interpretive analysis of human experience and societal contexts.

Conversely, Jomini's contributions can be interpreted through an analytical philosophical framework, emphasizing clarity, logic, and the application of scientific principles to military strategy (Jomini 1992). His approach, grounded in the empirical study of historical campaigns, seeks to identify universal principles that govern warfare. This perspective aligns with the analytical tradition's emphasis on dissecting complex phenomena into understandable components, suggesting that military success derives from the strategic application of these timeless principles.

This juxtaposition of Clausewitz's and Jomini's theories, viewed through the respective lenses of continental and analytical philosophy, reveals the diverse ontological foundations underlying military science. Clausewitz's focus on the existential and unpredictable aspects of war challenges us to consider the broader implications of military action, while Jomini's systematic analysis provides a framework for understanding warfare as a discipline governed by identifiable rules and strategies. Together, these viewpoints underscore the importance of philosophical underpinnings in shaping our understanding of war's nature and essence, highlighting the need for a multifaceted approach that embraces both the complexity of human experience and the precision of logical analysis. Therefore, this legacy of Clausewitz and Jomini still offer valuable insights into the complexity of modern military operations as discussed by Høiback in his examination of "Military Operations" within the *Handbook of Military Sciences* (Høiback 2021).

## **How Disciplinary Background Shape Ontology: The Civil–Military Relations Case**

It is not only from scholarly work within the realm of philosophy we can observe the influence of ontological underpinnings. In the study of civil–military relations, the contrasting perspectives of Samuel P. Huntington a political scientist affiliated with the realists within International Relations and Morris Janowitz a sociologist closely connected with the Chicago School of Sociology and influenced by American Pragmatism offer insight into how other disciplinary backgrounds also shape ontology.

Huntington's ontology, as articulated in *The Soldier and the State*, is rooted in a realist tradition, postulating a clear, structured demarcation between the military and civilian spheres (Huntington 1957). He perceives these entities as distinct, with the military characterized by its professional nature, hierarchy, and the imperative of national security, while the civilian domain is marked by a broader diversity of values and interests. Huntington emphasizes the necessity of maintaining a balance of power where the state retains ultimate authority over the military to ensure democratic governance and prevent military dominance in political affairs. His perspective is deeply analytical, focusing on the mechanisms of power and authority to maintain this balance.

In contrast, Janowitz, particularly through his sociological lens, offers a more fluid and dynamic view of the military's relationship with society clearly expressed in *The Professional Soldier* (Janowitz 1960). His work suggests that the military and civilian sectors are not rigidly separated but are interdependent, with permeable boundaries allowing for mutual influence and adaptation. Janowitz emphasizes the military's integration into societal structures, advocating for its evolution in response to social changes and the broader needs of democracy. This includes the military's involvement in non-traditional roles, such as peacekeeping and nation-building, reflecting its adaptability and the changing nature of warfare and societal expectations.

While Huntington's ontological foundation, reminiscent of analytical philosophy, is characterized by clear delineation and a focus on maintaining a structural–functional balance between military necessity and civilian control, Janowitz's ontology, observed through a continental lens, embraces a more integrated approach, highlighting the interplay and mutual adaptation between the military and society. Together, their works cover a broad spectrum of understanding civil–military relations, from the analytical and structural focus of Huntington to the more sociologically nuanced and dynamic perspective of Janowitz. These differing ontologies reflect their diverse disciplinary backgrounds and theoretical commitments, offering complementary insights into the complex nature of military institutions and their role within democratic societies.

A broader and deeper exploration of some of the philosophical underpinnings that constitutes the civil–military relations discourse are offered in both the “Dynamic Intersection of Military and Society” and “International Relations and Military Sciences” chapters of the *Handbook of Military Sciences*, which both in their distinctive disciplinary manners delves into the intricate relationship between military entities and societal dynamics (Roennfeldt 2023; Shields 2020).

## **How National and Experiential Background Shape Ontology: The Naval Warfare Case**

The philosophical foundations of military sciences are significantly influenced by the national and experiential backgrounds of its theorists. This is vividly exemplified in the analyses of naval warfare by Alfred Thayer Mahan and Sir Julian Stafford Corbett. Their contributions, rooted in distinct cultural and professional experiences, shed light on how ontological perspectives on the military, and naval forces in particular diverge and converge, thereby shaping our comprehension of sea power's essence and its role in international relations.

Mahan, an officer in the United States Navy and a naval historian, formulated a groundbreaking approach to naval strategy, rooted in his personal engagement with maritime operations and the context of American geopolitical ambitions (Mahan 1900, 1911). Grounded in a meticulous historical analysis, Mahan's analytical framework, which echoes the precision and systemization characteristic of analytical philosophy, emphasized the critical role of naval power in achieving national

supremacy. His seminal work, *The Influence of Sea Power upon History* (Mahan 1900), leveraged historical cases to argue for sea control as a pivotal lever of global influence, underscoring the ontological significance of maritime dominance in shaping the geopolitical landscape. Consequently, Mahan's ontological exploration probes the essence of sea power as a decisive force in international affairs, informed by his dual expertise as a naval strategist and historian, alongside the geopolitical ambitions of the United States during his time.

In contrast Corbett, a civilian British lawyer and historian, broadened naval strategy beyond mere military dominance (Corbett 2009). His work reflects a continental philosophical stance, integrating political, social, and economic dimensions into the understanding of naval warfare's ontological investigation. In *Some Principles of Maritime Strategy* (Corbett 2009), Corbett highlighted the synergy between naval and land forces and maritime commerce's vital role, advocating for a nuanced ontology of naval warfare that reflects the complexity of power projection and national defense. Shaped by his British background and academic insights, he saw naval strategy not solely as a tool for supremacy but as being integral to a nation's strategic framework and international posture. His approach, recognized the strategic deployment of fleets for achieving political objectives and the importance of maintaining command at sea through versatile and adaptive strategies, redefined the ontology of naval warfare, acknowledging its complexity and significance in global dynamics.

The contrasting ontological lenses through which Mahan and Corbett viewed naval warfare—molded by their unique national contexts and personal experiences—provide a rich framework for delving into military sciences' philosophical underpinnings. Mahan's emphasis on strategic points and decisive naval power, akin to Jomini's principles, showcases a more traditional, "analytical" ontology, focusing on clear definitions and tangible outcomes (Mahan 1911). Conversely, Corbett's "continental" approach, enriched by political and social intricacies, presents a complex ontology that challenges oversimplified interpretations of military power, echoing Clausewitz's broader vision (Albrecht et al. 2021).

For those seeking a deeper dive into Mahan and Corbett's theoretical legacies and their enduring influence on naval doctrine, the chapter on the "Concept of Sea Power" in the *Handbook of Military Sciences* offers a valuable starting point (Albrecht et al. 2021).

## Reflections and Implications

As much as these presented case examples make sense, they are still interpretations of what is taken to be reality. The military as a research object is a complex and multifaceted creature; there are layers of entities, with divergent purposes, doing different stuff, based upon a variety of theoretical understandings. Adding the fact that the military and that which belongs to it tend to evolve, merge, or dissolve over time makes it an almost impossible task to create a singular encompassing ontological framework of it. Consequently, making sense of the military implies some kind

of informed deliberation on why something rather than something else becomes the focal point of our curiosity. It is easy to acknowledge the divergent views on and of the military by different stakeholders like scholars, soldiers, commanders, policymakers, and civilians truly making it difficult to capture the true ontological essence of what the military is. Thus, accommodating to these struggles accentuates the ontological risk of oversimplification.

Despite, and perhaps because of, these challenges, the core value of ontological analysis lies in its ability to clarify and systematize the foundational elements of that military thing or concept we are investigating. Ontology offers a structured approach to dissecting the essence of military entities, actions, and ideas, enabling a deeper understanding of their underpinnings. This clarity is invaluable for military scholars, enhancing methodological awareness, debate, and decision-making by providing a solid conceptual foundation of their studies. In essence, and done well, it bridges the gap between abstract military concepts and practical application, making it an indispensable tool for those in the Military Sciences field.

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## What Is Military Knowledge: The Epistemological Perspective?

Theory of knowledge, or the study of knowledge, is in philosophy of science termed “epistemology,” a term rooted in the Greek word *Epistēmē* simply meaning “knowledge.” Hence, a narrow understanding of epistemology is that it is the study of knowledge, whereas a broader understanding is that “epistemology is about issues having to do with the creation and dissemination of knowledge in particular areas of inquiry” (Steup 2017, first paragraph).

In the context of military sciences, we can therefore assert that epistemology is concerned with *knowledge* related to the *military* as a phenomenon in general and with *military knowledge* more confined. In other words, epistemology in this framework is attentive toward what it means to know something *about* the military, *in* the military, or even *militarily*. Accordingly, epistemology in connection to military sciences informs questions such as, what is the nature of the knowledge we are building our study of the military on? How do we justify our military knowing? What sources do we have for military knowledge? What can we actually know about military entities, actions, and cognizance? This is in line with how Barnett frames epistemology through four fundamental questions related to the nature of knowledge, its justification, its sources, and its scope (Barnett 2021, pp. xix–xx).

## The Nature of Military Knowledge

Accordingly, a vocal epistemological debate within the military sciences field is related to *the nature of military knowledge* either being embedded in a theoretical or a practical knowledge tradition. Historically, Heuser argues, these conceptions are expressed by the terms “science” and “art” (Heuser 2016, p. 180). In her

etymological note, she asserts that “art” is rooted in the Latin *ars* conveying the “practical ability to do something” which is also underscored in the French and English word “artisan” and skilled craftsman. While “science” in contrast depicts an approach that is built on “[a]bstract logic, mathematics, upon the laws of nature” (Heuser 2016, p. 180).

This separation of “art” and “science” in the “nature of military knowledge” debate also mirrors the tension between subjective experience and . “Art,” in this context, aligns closely with subjective experience, drawing upon the nuanced, often tacit knowledge that comes from practical, hands-on engagement in military activities. This form of knowledge is deeply personal, shaped by individual perceptions and experiences within the military world. On the other hand, “science” represents objective reasoning, characterized by systematic analysis, empirical investigation, and the application of abstract logic and theoretical frameworks to understand military phenomena. This approach strives for universal principles and laws, transcending individual experiences to achieve a broader, more generalizable understanding.

To reconcile these seemingly divergent epistemological perspectives, one can turn to Hegel’s dialectical mode of thesis, antithesis, and synthesis. In the multifaceted field of military sciences (Sookermany 2024), the “thesis” of subjective experience (art) and the “antithesis” of objective reasoning (science) interact dynamically. This interaction is not merely a conflict but a progression toward a “synthesis” that integrates the deep insights of personal military experience with the rigor and universality of scientific inquiry. Corbett’s “Some Principles of Maritime Strategy” is an example of the fact, as it offers a balance between Mahan’s objective principles and the subjective nature of naval warfare (Albrecht et al. 2021; Corbett 2009). Similarly, Naveh’s exploration of military excellence showcases this dialectical synthesis (Naveh 1997). Naveh scrutinizes the development of operational art and theory, critiquing the traditional military mindset that often lags in adapting to the evolving nature of warfare. He advocates for a more innovative approach, where knowledge is not merely accumulated but also created, disseminated, and justified, echoing the integrative principles of military sciences. This blend of subjective military insights and objective analytical deliberations not only enriches the field of military sciences, but in some cases even exceeds it by arguing a third way—one of design, “whereas art is expressive and science is explanatory, design is *expedient*” (Trew et al. 2023, p. 5). Such a dialectical approach encourages a fuller, more nuanced comprehension of military knowledge, valuing both the depth of personal experience and the abstraction of theoretical analysis as bases for something that transcends traditional paradigms of military thought.

## Justification of Military Beliefs

This discussion leads us to the *justification of military beliefs*, specifically distinguishing between mere beliefs and justified beliefs within a military context. Broadly speaking, military beliefs encompass attitudes or assumptions about

military entities, doing, or thinking. For instance, a commander might believe that a certain plan will lead to victory. However, to transcend speculation, this belief must be grounded in the realities of the situation and supported by qualified evidence prior to action. In military epistemology, beliefs require adequate justification to transform into actionable military knowledge. Consider a scenario where a belief in a plan's effectiveness is not only informed by past successes but is also strengthened by rigorous intelligence analysis, scenario planning, and expert consensus beforehand. Such a belief might then be justified, aligning with the traditional epistemological view that for beliefs to qualify as knowledge, they must be supported by adequate justification.

This perspective aligns well with Aristotle's notion of "Endoxa," which generally conveys beliefs that are widely accepted as reputable opinions, thereby emphasizing the need for beliefs to be well-supported to be considered knowledgeable. The assertion that "knowledge is justified true belief" (Ladyman 2002, p. 6) underscores this requirement. Despite criticisms and debates surrounding this definition (DeVries 2017; Gettier 1963), a common understanding persists that justification is a foundational premise for beliefs to be regarded as knowledge. This raises the pivotal question: What counts as adequate justification in the military realm?

## Sources of Military Knowledge

Epistemologically, here is where *sources of military knowledge* become visible. As already alluded to, the sources of knowledge for military sciences are multifaceted, drawing from both sensory experience and logical reasoning to establish a sound scientific foundation (Heuser 2016). This is where Gilbert Ryle's (Ryle 1949) classic distinction between "Knowing that" and "Knowing how" type of knowledge offers a broad but still useful umbrella for the categorization of what constitutes as sources of military knowledge. "Knowing that" refers to theoretical or propositional knowledge and is often characterized by its reliance on evidence, data, and formal analysis. As epistemological sources, they range from empirical studies and technological advancements to historical analyses and philosophical debates, each contributing uniquely to the depth and scope of military understanding. They also encompass insights from social sciences, such as psychology and sociology, and apply critical military epistemology to adapt and evolve with the changing nature of warfare and military practice.

On the other hand, "knowing how" type of knowledge refers to practical experience, skills, and intuition, as opposed to purely theoretical or factual ("knowing that") knowledge. This practical knowledge, often termed as "tacit knowledge" (Polanyi 1967), is crucial in military contexts as it encompasses skills and abilities acquired through hands-on experience, training, and the intrinsic understanding of complex situations. As epistemological sources, they are cultivated and found in a blend of case studies and after-action reports, military training manuals and field guides, biographies and memoirs, documentaries and interviews, participatory

learning in training exercises, simulations and war games, research on military training and education, as well as ethnographic studies.

## Scope of Military Knowledge

Consequently, the *scope of military knowledge*, within the epistemological perspective, presents a rich tapestry of theoretical approaches that cater to the multifaceted nature of military studies. It extends from the structured, empirical frameworks of scientific rationalism, notably championed by Popper's critical rationalism, through the nuanced, language-centered perspectives of Wittgenstein's linguistic turn, to Derrida's concept of deconstruction, and Goldmans ideas of social epistemology. Popper's approach, with its emphasis on falsifiability and rigorous testing, underscores the importance of empirical validation and systematic skepticism in military epistemology (Popper 1959). This scientific methodology is crucial for developing reliable military technologies and strategies, ensuring they are rigorously tested and adaptable to evolving combat scenarios.

Conversely, Wittgenstein's linguistic turn shifts the focus to the role of language and context in shaping our understanding of military concepts (Wittgenstein 1953). His philosophy illuminates how military knowledge is not only a product of empirical facts but also deeply rooted in the language and symbols through which these facts are communicated and understood. This perspective is vital in comprehending the narratives, doctrines, and communicative practices that form the backbone of military cultures and operations.

Alongside Wittgenstein's exploration of the role of language, Jacques Derrida's concept of deconstruction offers a different, yet equally critical, perspective on how texts and meanings operate. Derrida (1976) argued that meanings in texts are not fixed but can be "deconstructed" to reveal inconsistencies, ambiguities, and hidden assumptions. His approach, emerging from a continental tradition, challenges us to examine military doctrines and strategies critically, to uncover the underlying power dynamics, biases, and contradictions. Deconstruction compels us to question not only what military texts explicitly state but also what they imply, omit, or marginalize. This method is crucial for scrutinizing military doctrines and similar forms of military wisdom, ensuring they are robust against unexamined presuppositions and potential misinterpretations.

This critical examination opens the door to understanding how military knowledge and knowing are not only constructed but also shared and validated within military communities. Here Alvin I. Goldman's concept of social epistemologies becomes particularly relevant. Goldman (1999) emphasizes the role of social processes and institutions in shaping what is accepted as knowledge, suggesting that our understanding of military concepts is also a result of collective endeavors. This perspective highlights how knowledge is not just an individual achievement but is significantly influenced by the broader social context in which it is developed and disseminated. In military contexts, this means recognizing that ideas, concepts, and habits are often the product of collaborative efforts, shaped by institutional practices



and cultural norms (Rietjens 2021). Thus, the critical insights provided by Derrida's deconstruction lead naturally into Goldman's exploration of the social dimensions of knowledge production, where military knowledge is seen as a collective achievement, reflecting both individual insights and institutional validation. This comprehensive view not only deepens our understanding of the scope of military epistemology but also reinforces the practical implications of these theoretical insights in shaping military entities, concepts, and practice.

## Reflections and Insights

In sum, this exploration of military knowledge acknowledges the intricate relationship between theory and practice as an epistemological foundation for studying the military. More so, it speaks to the challenge of integrating subjective experiences with objective analysis to construct a robust understanding of military knowledge.

In navigating the dynamic landscape of military sciences, the acknowledgment of epistemology's role is pivotal. It not only enhances our grasp of military phenomena but also equips us with the understanding to question and validate the sources of our knowledge. This reflective awareness ensures that military professionals are not merely recipients of information but active participants in the creation and evaluation of knowledge. Emphasizing the epistemological value in military sciences promotes a culture of critical thinking and innovation, essential for adapting to new challenges and advancing military effectiveness. Ultimately, it is through this epistemological lens that we can achieve a deeper, more nuanced understanding of the military domain, ensuring that our strategies and decisions are informed by a balanced synthesis of theoretical knowledge and practical experience.

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## What Is the Purpose of the Military: The Teleological Perspective?

Teleology, derived from the Greek "telos" meaning "end" or "purpose," is a philosophical concept that seeks to study a phenomenon by its intended outcome rather than their causal origins (Britannica 2023). Rooted in Aristotelian philosophy, teleological perspectives contrast with mechanistic views, focusing on the "What is this for?" or "What is the goal or function of this?" rather than the "How did this come to be?" or "What process led to this?" (Aristoteles 1882; Kant 2013).

In the broader spectrum of philosophy, teleology has been applied to various fields, from biology, where it can explain the function of organs in a living organism (Allen and Neal 2020), to ethics, where it forms the basis of consequentialist theories which judge actions by their outcomes (Gruenwald 2007). In essence, teleology is about looking at the bigger picture, understanding entities, and events not in isolation but as parts of a larger system with inherent purposes.

The relevance of teleological thinking extends to the field of Military Sciences as well. Here, it prompts us to consider not just the immediate tactics or outcomes of military actions, but the ultimate goals and objectives that these actions are intended



to achieve. Whether in the formulation of strategy, the ethical considerations of military engagement, or the structure and function of military institutions, a teleological perspective offers a unique and insightful vantage point. It encourages a deeper contemplation of the “why” behind the “what” and the “how” of military affairs.

## Ancient and Classical Eras

Throughout history, the purpose of the military has varied significantly, shaped by the philosophical and cultural paradigms of different eras. In *ancient Greece*, the role of the military was interpreted through the lens of the city-state’s values and objectives (Thucydides 2009). Athens, known for its focus on democracy, philosophy, and the arts, viewed its military as a necessary tool to protect its way of life and democratic ideals. The Athenian military, thus, served a purpose beyond mere conquest or defense; it was integral in safeguarding the intellectual and cultural achievements of Athens. Aristotle’s teleological view might have seen the Athenian military as fulfilling the purpose of defending not just the physical city, but also its intellectual and ethical ethos.

In stark contrast, Sparta, a city-state renowned for its martial culture, epitomized a different teleological perspective (Thucydides 2009). The Spartan military was the very heart of its society. Every aspect of Spartan life was geared toward military proficiency and discipline. Unlike Athens, where the military was one aspect of a multifaceted society, in Sparta, the military was the society. The purpose of the Spartan military was not only to defend its territory but to embody and perpetuate the Spartan way of life, centered around strength, discipline, and martial prowess.

This juxtaposition between Athens and Sparta illustrates how the perceived purpose of the military can vary significantly within even closely situated cultures. It highlights the influence of societal values and objectives in shaping the teleological understanding of what the military is meant to achieve.

## Medieval Chivalry and Crusades Versus State Rationality in the Enlightenment

The teleological perspective on the military further evolves as we transition from the Medieval period to the Enlightenment, each period marked by distinct societal values and objectives that defined the military’s purpose. During the *Medieval era*, the concept of chivalry and the religious passion of the Crusades brought a unique teleological understanding to the military’s role (Cartwright 2018). In this period, the military was not just a protector of the realm but also a vessel for religious and moral ideals. Knights were expected to adhere to the code of chivalry, which integrated martial prowess with Christian virtues like piety, justice, and mercy. The Crusades, significant military campaigns of this era, were seen as holy wars, driven by a divine mandate to reclaim or defend sacred lands. This perspective framed the military’s

purpose as transcending mere territorial defense or conquest; it was about upholding spiritual and moral values, intertwined with the broader political goals of Christendom. Here, the teleological purpose of the military was deeply embedded in religious and moral objectives, reflective of the medieval worldview.

The *Peace of Westphalia* in 1648 laid the groundwork for the modern concept of state sovereignty, providing a principal foundation for the political attitude of the *Enlightenment* era. For the purpose of military force, this brought about a paradigm shift with a more rational and state-centric view of the military's role. Clausewitz, a prominent figure of this era, articulated a perspective where the military was primarily seen as a means to achieve political ends (Clausewitz et al. 1984). His principle, "War is the continuation of politics by other means," epitomizes this shift. In this view, the military's purpose was grounded in the service of the state's rational objectives, such as national security, territorial integrity, and political interests. The teleological perspective here was less about moral or spiritual aims and more about the pragmatic, rational fulfillment of state objectives. Clausewitz's approach mirrored the Enlightenment's emphasis on reason and the burgeoning concept of the nation-state, marking a departure from the religious and chivalric motivations of the medieval military.

The contrast between the Medieval and Enlightenment periods in terms of the military's teleological purpose is stark. On the one hand, the Medieval era's fusion of martial action with religious and chivalric ideals, and on the other, the Enlightenment's rational, state-centric approach, demonstrate the malleability of the military's purpose in reflecting the prevailing philosophical and cultural ethos. From the moral and spiritual battlegrounds of the Crusades to the rationalized battlefields of the Enlightenment, the evolution in military thought underscores the influence of broader societal shifts on how the purpose of the military is conceived and pursued.

## Modern Perspectives and World Wars

Following the rational and state-centric perspectives of the Enlightenment, the twentieth century witnessed further evolution in the teleological understanding of the military, particularly through the experiences of the World Wars and the subsequent shift into contemporary times.

The two *World Wars* brought about a significant change in the perception of the military's purpose. In this era, the military was increasingly viewed as a tool for national survival and global influence (Hindley 2017). The devastating scale and global reach of these conflicts underscored the military's role in protecting national security, territorial integrity, and even ideological beliefs. The concept of "total war," where the entire resources of the state are mobilized, highlighted the military's role as central to the existence and preservation of nations. Furthermore, the development of nuclear weapons and the onset of the Cold War introduced the concept of *deterrence* as a primary military objective (Delpech 2012). The military's purpose in this modern context was not only about direct combat but also about preventing war through a balance of power and the threat of mutually assured destruction. This

period represents a shift toward a more complex and globally interconnected understanding of the military's role (Baylis et al. 2022).

In *contemporary times*, military engagements have evolved, reflecting a shift toward addressing complex, multifaceted challenges that transcend traditional defense roles (Kaldor 2006; van Creveld 2008). Beyond traditional defense roles, modern militaries are often engaged in peacekeeping operations, humanitarian interventions, and the global fight against terrorism. This reflects a teleological perspective where the military is seen as a key player in maintaining international stability and human security. The rise of asymmetric warfare and the challenges posed by non-state actors have further nuanced the military's purpose, emphasizing adaptability, peace-building, and international cooperation (Kitzen 2020). In this contemporary view, the military's role is not solely defined by state-centric goals but is increasingly influenced by global ethical considerations, human rights, and a responsibility toward international peace and stability (Betts 2017; Reichberg et al. 2006).

The transition from the World Wars to contemporary times illustrates a dynamic shift in the teleological understanding of the military. From the existential struggles and ideological battles of the World Wars to the diverse and complex challenges of the modern globalized era, the evolution in military thought reflects an expanding and multifaceted conception of the military's purpose (van Creveld 1991). This narrative underscores the military's adaptive nature in response to changing geopolitical landscapes, societal values, and global challenges. The contemporary military, with its varied roles and responsibilities, encapsulates a teleological perspective that is as concerned with preventing conflict and fostering global stability as it is with traditional notions of defense and warfare.

## Insights and Reflections

In concluding our exploration of the military's purpose from a teleological perspective, it is crucial to acknowledge the complexities and challenges inherent in this approach. While teleology offers a framework to understand the military's evolving roles and objectives, it can sometimes oversimplify the intricate realities of military engagement and geopolitical dynamics. The risk lies in potentially reducing the vast and varied motives of military actions to singular end goals, which may not fully account for the diverse and sometimes conflicting interests at play.

Furthermore, the application of teleology in military contexts must navigate the delicate balance between idealistic objectives and pragmatic considerations. The military's purpose, as seen through various historical and contemporary lenses, often intersects with ethical dilemmas and the harsh realities of conflict and power politics. As such, teleological analysis in military sciences must be complemented by a critical understanding of the moral and practical implications of military actions.

This exploration underscores the value of teleology in enriching our understanding of the military's role within society, offering a lens that goes beyond mere functionality to consider deeper purposes and meanings. However, it also highlights

the need for a nuanced and multidimensional approach in studying the military, one that appreciates the complexity of the military's purpose in a constantly evolving global landscape.

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## **How to Pursuit Military Knowledge: The Methodological Perspective?**

Methodology, from the Greek “Methodos” meaning “pursuit of knowledge,” is a philosophical concept concerned with the study of methods (Creswell and Creswell 2023). In the realm of Military Sciences, this translates into a rigorous, reflective, and reflexive exploration of the frameworks and theoretical underpinnings that guide the pursuit of military knowledge (Carreiras et al. 2016; Gertz 2014). Unlike mere “methods,” which are the specific tools and techniques used in research—such as data collection through surveys or analysis via statistical models—methodology delves deeper. It encompasses the series of decisions, debates, and justifications that shape and define the approach to understanding military phenomena, whether it be analyzing the structure of military organizations, the dynamics of military actions, or the mindset of human engagement (Soeters et al. 2014).

In a philosophy of science talk, James underlines and expands on this interpretation of methodology in relation to methods by stating:

It's the set of discussions, debates, decisions, choices and the argument why this rather than that. It's logistical, it's pragmatic, it's about expense, resources, time, it's a whole series of decisions and debates leading to how you did your study. But it's not quite the same as methods, cause methods is what you end up with. (James 2015, Time 08:43)

Moreover, in Military Sciences, methodology plays a crucial role in not just guiding researchers in their quest for knowledge but also in conceptualizing the very nature of the knowledge they seek. The pursuit is an ongoing reflection, a reflexive dialogue between the researcher, the reality of the subject of inquiry, and those theoretical frameworks applied, influenced by factors such as ethical considerations, resource constraints, and the evolving nature of military affairs (Soeters et al. 2014). This reflective and reflexive process is vital in ensuring that the pursuit of military knowledge is not only methodologically sound but also adaptable to the unique challenges and complexities inherent in military studies (Christopher Paparone 2017). As such, there is a need for a community of Military Sciences that are aware of the fluidity of military practice and theory as well as active in the continuous effort of refining its methodological approaches. Thus, understanding methodology is essential for anyone engaged in the scholarly examination of military entities, activities, or mindsets, as it provides the philosophical scaffolding necessary for robust and relevant inquiries as well as the foundation for methodological development.

## **The Methodological Implication of a Multifaceted Nature**

Another key element in understanding the methodological perspective of Military Sciences is to acknowledge its multifaceted nature. A complexity that is not merely theoretical but more so manifested practically through its diverse utility of methodological approaches, which is evident in its vivid mixture of disciplinary, subdisciplinary, multidisciplinary, cross-disciplinary, interdisciplinary, and transdisciplinary methodologies (Caforio 2006; Nicolescu and Ertas 2013; Christopher Paparone 2017; Sookermany 2024). In this context, the methodological debate within Military Sciences takes on a complex and adaptive role. In essence, it serves as a conceptual negotiator that allows for the practical integration and interaction of diverse disciplinary and practice centered perspectives, each with its unique methods and theoretical frameworks.

The role of methodology in Military Sciences, therefore, extends beyond the traditional boundaries of a single discipline. It necessitates a broad and inclusive perspective, capable of synthesizing knowledge from a variety of fields, such as sociology, psychology, technology, and political science, to name just a few, as they relate to military contexts. This synthesis is crucial for understanding and responding to the intricate and often interwoven challenges faced in military environments (Carreiras et al. 2016; van Creveld 2008). As Military Sciences engage in this multilayered dialogue, methodology becomes a dynamic critical, reflective, and reflexive process. This guides researchers and practitioners (knowledge pursuers) not only in selecting the most appropriate approaches from a range of disciplines but also in critically examining their own underlying beliefs, values, and assumptions about these disciplines and their application to military phenomena (Ben-Ari 2014; Carreiras et al. 2016). Such a comprehensive approach pulls and pushes the pursuit of knowledge in Military Sciences to be both thorough in its methodological rigor and deeply aware of the broader context and implications of its findings.

In this way, methodology in Military Sciences is not just about selecting the right tools for research; it's about crafting a nuanced approach that captures the complexity and dynamism of the military (or a part of it) as a phenomenon of inquiry. This methodological framework is essential for addressing the unique challenges and opportunities that characterize the study and practice within Military Sciences.

## **Ethical Issues, Contemporary Challenges, and Methodological Innovations**

So far, this exploration has centered around the fundamental and somewhat basic aspects of methodology within Military Sciences, laying out its principal characteristics and philosophical underpinnings. However, it's equally important to touch upon some of the more fluid and emergent dimensions of methodology that respond to the current and evolving challenges of the field. These aspects highlight

the dynamic nature of Military Sciences, where methodological approaches must adapt to the ever-changing landscape of military operations and technological advancements as well as academic developments.

Ethical considerations have always been regarded as significant in any science, and the Military Sciences are no different (Perez 2014). Still, as technological advancements like artificial intelligence, cyber warfare, and unmanned systems become integral to military operations, they seem to become even more pertinent (Gertz 2014; Morgan et al. 2020). These technologies present not only new opportunities for military and scientific development but also complex moral dilemmas regarding their utility in pursuing knowledge as well as use in military practice. Hence, these moral dilemmas stress the value and necessity for scholars to engage in debates about their strengths and vulnerabilities so as to foster a more ethically informed and methodologically sound approach to Military Sciences, ensuring that the pursuit of knowledge is both responsible and responsive toward academic standards in addition to the evolving demands of modern military operations.

In addition to these ethical and technological considerations, military researchers must navigate the intricate challenge of managing sensitive or classified information (Balmer 2016; McManus et al. 2005). This task demands a careful balance between rigorous academic inquiry and the need for military confidentiality. Such balance is crucial in maintaining the integrity of both the research process and military operations (Jelušič et al. 2016). Moreover, the unpredictable and rapidly evolving nature of contemporary conflict scenarios further accentuates the need for methodologies that are not only adaptable but also agile in responding to real-time changes. This adaptability is essential for research to remain relevant and effective, providing sound insights that are timely and applicable in fluid military contexts.

The substantial impact of cutting-edge technologies on military research methodologies cannot be overstated (Billing et al. 2021; Booß-Bavnbek and Høyrup 2003). Innovations in data collection and analysis, along with advanced simulation of complex scenarios and predictive modeling, have significantly enhanced the depth and accuracy of military studies. These technological advancements are not just augmenting existing methodologies in the quantitative and empirical sciences but are reshaping the very fabric of how military research is conducted in all branches—the natural and social sciences as well as the humanities. This rapid technological progression requires researchers to be in a state of constant adaptation, not only to keep pace with emerging tools and techniques but also to conscientiously address the ethical ramifications these advancements entail. It's a dynamic environment where the proficiency in technological utilization is as crucial as the understanding of its broader implications—militarily and academically.

In the pursuit of military knowledge, particularly in the realm of methodology for innovative purposes, it might be useful to recognize and consider the dynamic and adaptive philosophies akin to those of Feyerabend (1975). His belief in methodological anarchism, as captured in his maxim “anything goes,” invites military scholars to foster a paradigm of intellectual flexibility and pluralism. Such an approach aligns with innovative problem-solving strategies in the face of complex

ethical dilemmas and the evolving landscape of contemporary military challenges. An integration of such a philosophical attitude acknowledge the limitations of rigid methodological frameworks and open the Military Sciences discourses to a more eclectic and pragmatic array of knowledge acquisition strategies (Graicer 2017; Naveh 1997; Sookermany 2017). Thus, in the continuous evolution of Military Sciences, Feyerabend's ideas are perhaps not so much applied as prescriptive doctrines but as a call to embrace methodological diversity and resilience.

## Insights and Takeaways

In essence, the pursuit of military knowledge through a methodological lens is, or should be seen as, a journey of continuous adaptation and multifaceted exploration. It suggests an integration of diverse disciplinary insights, balancing rigorous academic standards with the practical realities of the military. At its core, this journey is about more than just the tools and techniques of research; it is about fostering a critical, reflective, and reflexive mindset, one that is always responsive to the philosophical underpinnings as well as ethical, technological, and operational complexities of the military world. Thus, methodology in Military Sciences is not merely a framework for research; it is a dynamic process that evolves with the challenges and opportunities of the field, guiding scholars in their quest to understand and shape the ever-changing landscape of military sciences—as a practice and theory.

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## Summary

Even though these four philosophical concepts—ontology, epistemology, teleology, and methodology—for analytical clarity are within the context of this chapter presented as individual concepts, it is paramount to underscore that their real power and utility in advancing military sciences lie in their interrelation, acting as a multidimensional framework for exploration and understanding. Accordingly, these conceptions should be seen as complementary lenses through which knowledge pursuers can explore their subjects, recognizing that a shift in perception related toward one perspective almost invariably influences and refocuses the lens of the others.

Furthermore, it is apt to highlight that these philosophical underpinnings, whether explicitly addressed or not, are integral to every research endeavor within any serious academic field, with the field of Military Sciences being no exception. This underscores the utility for scholars to adopt a critical, reflective, and reflexive stance toward their research, mindful of how these concepts interact and enrich one another, thus shaping a more coherent and robust inquiry.

Engaging critically with these philosophical concepts enables scholars to rigorously evaluate and challenge the foundational assumptions, practices, and implications of their work, thereby enhancing analytical depth and precision. Such critical

scrutiny not only questions each concept individually but also explores their synergies, recognizing that shifts in epistemological frameworks, for example, can necessitate adjustments in methodological approaches.

By reflecting on their own biases and the contextual influences on their research, scholars nurture a deeper self-awareness and a more nuanced understanding of their subject matter. Reflexivity, in turn, compels them to consider how their positionalities and the very act of inquiry itself shape and are shaped by the research process, promoting a dynamic interplay between the researcher and the researched. This reflective and reflexive engagement is enriched by understanding the interconnectedness of the philosophical foundations, facilitating a more adaptive and comprehensive approach.

Scholars are thus presented with a choice: to consciously navigate these dimensions, thereby taking command of their research trajectory, situating their work within a broader discourse, and dissecting its constitutive elements or to proceed with less deliberate engagement, where these foundational aspects might be inadvertently overlooked, rendering some decisions as circumstantial rather than intentional and in the process misplacing their contribution in the wrong debate, journal, or even field of inquiry. In either scenario, the intertwined nature of ontology, epistemology, teleology, and methodology acts as a crucial backdrop, influencing the depth and direction of the inquiry.

**In conclusion**, this layered understanding is pivotal, emphasizing the richness and depth that a conscious, interconnected approach to ontology, epistemology, teleology, and methodology brings to the advancement of military sciences. As we conclude, it is vital to reiterate the essence of these philosophical dimensions not just as individual pillars but as a cohesive framework that, when engaged with critically, reflectively, and reflexively, propels our understanding and application of military sciences forward. This interconnected approach not only advances knowledge but also ensures that scholarly work is reflective of a complex, ever-evolving field, characterized by its rigorous, evaluative, and introspective exploration of foundational concepts. Through this holistic engagement, scholars are better equipped to navigate the intricate landscape of military sciences, leveraging the dynamic interplay among these philosophical underpinnings to foster innovation and depth in their research endeavors.

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## Cross-References

- ▶ [Concept of Sea Power](#)
- ▶ [Dynamic Intersection of Military and Society](#)
- ▶ [Intelligence in Military Missions: Between Theory and Practice](#)
- ▶ [International Relations and Military Sciences](#)
- ▶ [Military Operations](#)
- ▶ [Military Sciences – The Field](#)
- ▶ [Operations in Irregular Warfare](#)
- ▶ [Roots of Military Design](#)



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# Military Operations

Harald Høiback

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## Abstract

Military operations can be a complex and cumbersome undertaking, involving millions of soldiers and tonnes of equipment. Even though war has been part of human experience for time immemorial, systematic thinking about how to prepare, conduct, and use military operations is nonetheless a rather new undertaking. This chapter explores the history of thinking about military operations, broadly defined, and narrows down on operations as the concept is used today.

After the historical exploration, the chapter investigates how military operations can be studied. In principle, there are four different ways to approach

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H. Høiback (✉)  
Norwegian Armed Forces Museums, Oslo, Norway  
e-mail: [hahoiback@forsvaretsmuseer.no](mailto:hahoiback@forsvaretsmuseer.no)

operations as a field of study. The most common methods are the *historical method* and *operations research*, i.e., making heuristic models of reality. *Game theory* and *axiomatic foundationalism* are the other two but are far less used than the former two.

The development of modern military thinking notwithstanding, it is still difficult to convert military power to strategic gains, and the latter part of the chapter explains why. Military commanders and planning groups do not always get the *what* and *why* from the political level, making it difficult to find the *how*. Military operations are also intrinsically difficult because your opponent will try to *make* it difficult for you. The concept of an operational level of command is also problematic, since it tends to do the opposite of what is intended. Instead of pulling tactics and strategy closer together, it tends to push them apart. And finally, the word “art” in “operational art” is perhaps also an unfortunate misnomer?

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### Keywords

Military operations · Military thought · Strategy · Operational Art · Clausewitz · Epistemology

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## Introduction

From time immemorial, war has been part of human experience. It has also many ramifications, not only for those directly involved. According to Edward Mead Earle: “[war] is like a great tempest which blows upon us all, mingles with the church organ, whistles through the streets, steals into our fireside” (Earle 1944: vii).

War can thus be studied from many different directions, and with many different purposes, as has also been pointed out in the introductory chapters of this handbook (Sookermy 2020a, b). The aim of this chapter is to investigate the military core of war, i.e., where military men and women more or less skillfully put people, equipment, and movements together in order to overcome an enemy or solve a political problem. Our topic is not the causes of war, the preparation for war, or unintended consequences of war, but thoughts about how to use military means in order to reach goals beyond war itself. This chapter will introduce the concept of *military operations*.

Etymologically the word “operation” has its origins in the Latin word *operari*, which means to work or to labor. Typically, the word is used to denote the effort to reach rather complicated goals, usually implying planning, several subtasks, and considerable expertise. To fight wars is archetypically a venture that requires extensive planning, dividing the work into several different subtasks, and then aggregating the results.

Military campaigns or activity are usually done in close coordination with other means, such as, for instance, diplomacy and economy, but the concept of “military

operation” usually denotes the military side of that process. Strategy, on the other hand, denotes how military operations can be used to reach political goals.

In an effort to flesh out the concept of military operations, we will begin this chapter by looking into the history of thinking about military operations, broadly defined. As we will see, operations, as we use the term today, is a rather new concept, but people have obviously thought about how to use military means efficiently long before the word became commonplace in the military vernacular. Thereafter we will narrow down on operations as the concept is used today. Here we will depict that the concept of operation has fanned out in three rather different directions: as a process, a particular skill, and a level of command. We will close the chapter with a short introduction to how to study military operations, and then look into some of the reasons why it is still rather difficult to succeed with military operations, i.e., to reach political goals with, among other things, military means.

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## **A History of Military Thought: A Long and Winding Road Towards a Conceptualization of Military Operations**

You can of course skin the cat in many ways. It is particularly so with such a multifarious “cat” as military operations. Personally, I prefer to use history as a vehicle to explore the nature and development of military operations. Not because we will relive past experiences, but because studying the past gives us an impression of how the concept has evolved, and of those challenges it was developed to handle. It also gives us a feeling of how military thinking, and acting, always are closely related to thinking and acting more generally. By using history to explore military operations, we are also reminded that the way *we* do and think military operations today may not be eternally relevant.

### **The Ancient Roots**

As long as war has existed, people have commemorated fallen heroes and praised their deeds, but it is not until ca. 400 B.C., in China, that we find the first attempts to systematize knowledge of past wars in order to win the next (Creveld 2000, p. 20). Almost three millennia later, Sun Tzu’s *The Art of War* is still widely read. The current military popularity of the book is probably best explained by the spread of low-intensity warfare, and that the military canon of Europe is mainly centered on large inter-state wars, and offers few answers to contemporary questions the way Sun Tzu apparently does. Furthermore, the fact that *The Art of War* is short and crisp without military jargon, certainly helps to explain its popularity. It is a “compact guide” which presents its conclusions readily to the reader, not a “torturous and tortuous reasoning process,” as, for instance, is Clausewitz’s *On War* (Handel 1996, p. 22).

However, Sun Tzu’s aphorisms and lack of technical trivialities have also made the book’s practical value questionable for later generations. To what extend will

truisms, such as: “To effect a retreat that cannot be overtaken, employ unmatched speed” (Sun Tzu 1994, p. 191), actually help you in the field? If Sun Tzu, if he ever lived, never cared much about the practicalities of war, it is perhaps a greater problem to our own time that he did not care much about politics either: “One might win battles and even campaigns with Sun Tzu, but it is difficult to win a war by following his principles. The reason for this is that Sun Tzu was never interested in shaping the political conditions, because he lived in an era of seemingly never-ending civil wars.” (Herberg-Rothe 2007, p. 8).

Even if the Greek contemporaries of Sun Tzu invented philosophy as we know it today, their military peers were little concerned with the systematization and justification of military knowledge. Thucydides (c.460 – c.400 BC), an experienced officer himself, even makes a point out of the fact that the bellicose Spartans were virtually anti-intellectual when it came to war: “We are trained to avoid being too clever on matters that are of no use – such as being able to produce an excellent theoretical criticism of one’s enemies’ dispositions, and then failing in practice to do quite so well against them.” (Thucydides 1972, p. 85).

The Roman Flavius Vegetius came in the late fourth century A.D. quite close to becoming what we would now recognize as a military theorist, but even he seems to follow what may be called the “Aristotelian method of enquiry,” which depends on some sort of “intuition of the essential properties and natural purposes of things” (O’Hear 1989, p. 12). Vegetius was thus not really a theorist after all. His aim was not really to explain anything but to prescribe actions and military tricks of the trade in a “take-my-word-for-it” type of manner.

## The Military Renaissance

Some would perhaps judge it unfair to jump directly from Vegetius to Niccolò Machiavelli (1469–1527), leaving almost 1000 years of military contemplation in the dark, but when Machiavelli wrote *The Art of War*, he not only mimicked the structure of Vegetius’ *De re militari* but whole portions of the book were reproduced without much modification.

You would be excused for thinking that the invention of gunpowder had invalidated Roman experiences, but Machiavelli was of another opinion: “[T]he invention of artillery is no reason, in my opinion, why we should not imitate the ancients in their military discipline and institutions, as well as in their *virtù*” (Machiavelli 1965, p. 99). To Machiavelli’s generation, historical studies had great value, because history was regarded as: “an extensive testing ground of a relatively limited number of military systems” (Gat 2001, p. 3). This was so because man and society remained “in essence” the same, technological inventions notwithstanding, and lessons of history can thus be distilled from it. History offered “good examples to follow and bad examples to avoid” (Burke 2000, p. 182).



## The Military Enlightenment

If we are to believe the ancient Greek philosopher Socrates, a life that is unexamined is not worth living. The yearning for understanding, without any ulterior motives or practical aims, is apparently a crucial part of being human (Brunschwig and Lloyd 2000, p. 72). The post-renaissance generation, however, did not long for a disinterested philosophical contemplation of the world's order and harmony, but for an improvement of life. Early modern man started to use his knowledge instrumentally; he had become a problem solver, a person not previously seen in history. By the eighteenth century, useful and practical knowledge had not only become respectable but highly valued (Burke 2000, p. 110).

The first significant military thinker, and practitioner, who stood on the shoulders of people like Copernicus, Galileo, Bacon, and Descartes, if somewhat unwittingly, was the Italian General Raimondo de Montecuccoli (c.1609–1680). Due to several years of forced inactivity, as a Swedish prisoner of war, he became in many ways the first proto-scientific military writer we know (Barker 1975, p. 5). His way of contemplating had a certain scientific gist:

I have attempted within this concise framework, to encompass the vast areas of the only science vital for the monarch, and I have done my utmost to discover basic rules on which every science is based. . .and, having considered the entire range of world history, I dare to say that I have not found a single notable military exploit which would not fit in with these rules. (Rothenberg 1986, p. 63)

Montecuccoli marked a significant movement away from the previous “copy-a great-model” tradition, or rather the apprentice master relationship, and endeavored instead to “lay down laws on an empirical basis” (Barker 1975, p. 6). By that Montecuccoli “offered the foundations of a general theory of war” (Gat 2001, p. 15).

The Enlightenment developed an enormous self-confidence in the human mind's ability to catch the eternal laws that apparently govern every one of us. The rise of embryonic social science, or *civil philosophy*, as in Thomas Hobbes' *De Cive*, indicated that even volatile human beings could be dissected by modern scientific methods: “Ever since the great revolution which produced modern science there has been a hope that a science of society would be created on a par with the sciences of nature” (Cohen 1994, p. 101). The Enlightenment's belief in the ability of humans to know and manipulate the surroundings also had a strong influence on military thinking. Both the enemy and the chaos of war could at last be overcome by scientific methods.

The military Enlightenment was characterized by four inclinations: totality, “pioneerism,” reductionism, and scientism. We will have a quick look at each of them.

*Totality*, in this context, means that in the early phase of the military Enlightenment, most theorists opted to cover all aspects of war, “down to the smallest details” (Gat 2001, p. 34). Hence, it was not unusual to find treatises dealing with everything from the preferred fabric of woolen blouses to formations of pikemen and the nature



of war. But during the Enlightenment, this totality began slowly to crack into subdisciplines.

The second inclination, *pioneerism*, indicates that while Isaac Newton (1642–1726) had few problems admitting that he was a dwarf standing on the shoulder of giants, his military contemporaries fiercely denied any predecessors worthy of the name. Jacques de Guibert (1743–90) stated, for instance, that his *Essai général de tactique*, published in 1772, was the masterpiece that finally created a science of war (Gat 2001, p. 46). Many military treatises had already been published, but this was still a pre-paradigmatic undertaking and every thinker was thus on his own so to speak. Much like a modern-day novelist, they were fully aware of other peoples' works, but they did not feel like members of a collegium that together added stones to a common theoretical edifice.

The next inclination of the military Enlightenment is *reductionism*. Presumably all past masters of the art of war, for instance, Caesar (100–44 BC) and Gustavus II Adolphus (1594–1632), had adhered to the same general rules of war, however unwittingly. Hence, the rules had tacitly existed, even if no one had yet managed to pin them down in theory. The idea was that the theory of war could be derived from the full scope of historical observation, from Homer until the present day. The principles of war were nuggets of gold, ready to be revealed by anyone able to wash away all peculiarities and apparent irregularities. This sentiment has outlived the Enlightenment itself: "It certainly cannot be a mere coincidence that we always find identical principles underlying the ways of acting of all the great captains; for that reason alone we already have the right to believe that their successes have been due precisely to their agreement in the application of these principles" (Alger 1982, p. 71).

The last inclination, the *scientism* of military thought, to use a mildly anachronistic term, is also quite visible in this period. Newtonian science, with maximum mathematical precision, stood out as the era's crowning intellectual achievement, and most thinkers opted for something resembling it, even if less formalized: "The aim—so far as it was possible—was to bind assent in iron chains of mathematical and logical deduction, seeking to guide the mind along from necessary truth to necessary consequence" (Shapin 1996, p. 116). This general trend was enhanced by a particular trend within the military art as well. Marshal Sébastien Le Prestre de Vauban (1633–1707), the master of fortification and *siegecraft* during the reign of king Louis XIV (1638–1715), had shown the enormous potential of the *esprit géométrique* in war (Gat 2001, p. 37). With reference to Vauban, Frederick the Great (1712–1786) stated that: "The art of conducting sieges has become a profession like those of the carpenter and shoemaker. The rules are so well known that it is not worth the trouble of repeating them" (Frederick the Great 2005, p. 72).

## The Birth of the Paradigm

It was a former Swiss bank clerk, Antoine de Jomini (1779–1869), that managed to tie all the loose threads of the military enlightenment into a rather comprehensive

whole. Before Jomini, military thinking was typically pre-paradigmatic and pre-professional. After Jomini, military theorists implicitly agreed on what a proper military question was. Jomini established something resembling a Kuhnian paradigm, which to a great extent ended the interschool debate about the fundamentals of military science. According to Thomas S. Kuhn (1922–1996), a paradigm provides scientists “not only with the map but also with some of the directions essential for map-making” (Kuhn 1996, p. 109). Jomini marked the end of the military polymath and the self-taught entrepreneurial officer. Personal experience alone no longer qualified as science. Gradually, military science became a profession of its own, containing specialized concepts and vernacular, and where different contributors could lean on each other’s work, without having to establish the field of knowledge from ground up every time.

According to Jomini, the art of war “consists of five purely military branches, viz.: Strategy, Grand Tactics, Logistics, Engineering, and [Minor] Tactics” (Jomini 1971, p. 13). Strategy decides where to fight by directing “armies to the decisive points of a zone of operations,” while grand tactics are about handling the big battalions by “making good combinations preliminary to battles, as well as during their progress.” Minor tactics are then how to win all the small engagements that together add up to a major win on the battlefield (Jomini 1971, p. 178). In other words: Strategy picks the place to fight and allocates means and forces to do so, grand tactics arrange main military assets on the field of battle, and minor tactics guide the actual fighting on the pitch. In addition, come logistics, i.e., the science of how best to bring all the necessary stuff to the battlefield, and engineering, i.e., the science of constructing what the troops need to move and survive.

In addition to these five, there is also, according to Jomini, a sixth discipline, “more naturally and intimately connected with the profession of a statesman than with that of a soldier,” namely: “Diplomacy in its relation to war” (Jomini 1971, p. 13). If strategy deals with *where* to fight, statesmanship in its relation to war deals with *when* to fight, and against *whom*. These are important questions indeed, but “useless to a subordinate general” (Jomini 1971, p. 13). The only officer that needs to be bothered with policy is the general at the very top of an army. The rest should only focus on the pieces on the chessboard so to speak. The political context is just as irrelevant for the colonels, as it is for the chess player.

Jomini’s six disciplines are, to this day, the bedrock of military education and expertise. If there is such a thing as a military paradigm, Jomini is in the dead center. The first two of the disciplines, strategy and grand tactics, are obviously related to operations and operational art, as we use the terms today, and which we will return to.

By establishing this paradigm, Jomini had finally given us a bulletproof method to succeed in military operations:

It is true that theories cannot teach men with mathematical precision what they should do in every possible case; but it is also certain that they will always point out the errors which should be avoided; and this is a highly-important consideration, for these rules thus become, in the hands of skilful generals commanding brave troops, means of almost certain success.

The correctness of this statement cannot be denied; and it only remains to be able to discriminate between good rules and bad. In this ability consists the whole of a man's genius for war. (Jomini 1971, p. 323)

This was good news indeed. Perhaps too good to be true?

## A Counterpoint

The Prussian philosopher of war, General Carl von Clausewitz (1780–1831) is still the most prominent thinker who has tried to break with the Jominian paradigm. According to Clausewitz, there are several reasons why it is impossible for war to be turned into science, or into an art.

First, moral factors, including deeply human traits such as hatred, fear, and courage, will always be present and disrupt rational calculation. Secondly, war also includes positive reaction, or *lebendige Reaktion* in German. War is always a struggle *between* people, with reverse intentions and “the very nature of interaction is bound to make it unpredictable” (Clausewitz 1976, p. 139). There can thus not be a recipe for victory. Both sides cannot win. The third reason was the pertinent uncertainty of all information, or the fog of war, which compels the commander to trust his talent or luck, not just his skills.

Clausewitz consequently pointed out that both art and science can be red herrings in the hunt for the proper analogy: “we must go on to say that strictly speaking war is neither an art nor a science. To take these concepts as a point of departure is misleading in that it has unintentionally caused war to be put on a par with other arts or sciences, resulting in a mass of incorrect analogies” (1976, p. 149). To Clausewitz, it is something rather mundane that resembles war the most: “From the very start there is an interplay of possibilities, probabilities, good luck and bad that weaves its way throughout the length and breadth of the tapestry. In the whole range of human activities, war most closely resembles a game of cards” (1976, p. 86).

In a card game, the presence of the opponent is *sine qua non*. You never forget your opponent when playing poker. It is, unfortunately, very easy to forget him when making war, at least that he also has plans and intentions.

The sum total of war's moral factors is that it is impossible to “construct a model for the art of war that can serve as a scaffolding on which the commander can rely for support at any time” (Clausewitz 1976, p. 140). A positive doctrine, or in Clausewitz's own words *Eine positive Lehre* à la Jomini, is unattainable.

Apparently, Clausewitz had reached a dead end. Why should anyone bother to read his works if he had nothing to offer the military man?

Clausewitz pointed out two different solutions. The first was the most straightforward. He claimed that the problems identified did not apply equally to all elements of war: “What is most needed in the lower ranks is courage and self-sacrifice, but there are far fewer problems to be solved by intelligence and judgment” (Clausewitz 1976, p. 140). Consequently, “tactics will present far fewer difficulties

to the theorists than will strategy.” (Clausewitz 1976, p. 141). Indeed, it would not take a philosopher, such as himself, to figure out tactics: “‘Elementary tactics’, [Clausewitz] had declared in his 1804 notes, ‘are studied ten times more often – and much better – by sergeants’.” (Strachan 2007, p. 118).

Clausewitz’s second way out, i.e., the solution to the problems that remained at the higher level of war, is more intriguing: “The second way out of this difficulty is to argue that a theory need not be a positive doctrine, a sort of manual for action.” (Clausewitz 1976, p. 141). Instead he regarded theory as an aid for better thinking:

Theory will have fulfilled its main task when it is used to analyze the constituent elements of war, to distinguish precisely what at first sight seems fused, to explain in full the properties of the means employed and to show their probable effects, to define clearly the nature of the ends in view, and to illuminate all phases of warfare in a thorough critical inquiry. Theory then becomes a guide to anyone who wants to learn about war from books: it will light his way, ease his progress, train his judgment, and help him to avoid pitfalls. (Clausewitz 1976, p. 141).

To Clausewitz, policy is also relevant for everyone in uniform, not only for the general. If the officers forget the political goal, they can win all the battles, but still lose the war, or rather, not manage to reach the political goal. This is a crucial point in Clausewitz’s philosophy of war. The waging of war has to adopt to policy, and policy must adapt to its chosen means: “War in general, and the commander in any specific instance, is entitled to require that the trend and designs of policy shall not be inconsistent with these means. That, of course, is no small demand” (Clausewitz 1976, p. 87).

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## Modern War and the Concept of Military Operations

Viewed in the rear-view mirror, the Napoleonic wars, where both Jomini and Clausewitz had seen action, seem like one prolonged struggle that finally ended at Waterloo in 1815. But that was not the participants’ impression. For Napoleon, the next big battle should always be the last, and the one that forced the enemy to the negotiation table, on his terms (Nolan 2017, p. 12).

When the American Civil war broke out in 1861, everyone expected that this war would also be decided by one big battle. Not one of the gigantic Napoleonic size, but big enough for both parties to come to their senses. It soon became clear, however, that this war would not be over in one battle or one summer campaign. Later in life, the then famous General Ulysses S. Grant (1822–1885) was asked about his view on Jomini. Grant’s reply was that he had not paid the great theorist much attention because: “The art of war is simple enough; find out where your enemy is, get at him as soon as you can, strike at him as hard as you can, and keep moving on” (Gat 2001, p. 292). “Keep moving on,” is the key phrase. A battle won or lost is just a comma in a longer story. Not a punctuation mark.

In the wake of the Russo-Japanese War (1904–1905), and particularly The First World War, that also evolved into a Russian civil war, the Russians also noticed that

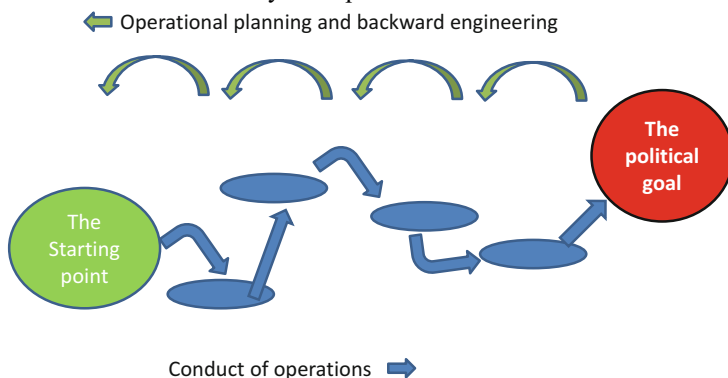
something important had happened to the art of war. The vast spaces of modern war, and the astronomic numbers of soldiers and equipment involved, made another military skill necessary, in addition to tactics and strategy. You needed operations in between, so to speak. As stated by the Chief of Staff of the Red Army, General Mikhail Tukhachevskii (1893–1938): “Since it is impossible with the extended fronts of modern times to destroy the enemy’s army at a single blow, we are obliged to try to do this gradually by operations which will be more costly to the enemy than to ourselves” (Naveh 1997, p. 183). In other words, the desired outcome of a battle or an engagement, or even a campaign, can rarely be victory, but an improved position to stage the next battle or operation.

## Operational Art

Tactics is about winning the battles, and strategy is about winning the war. The problem is that you can win all the battles but still lose the war. Particularly in modern wars, where the distances and numbers involved may be gigantic, or the political goal ill-defined or rather blurry, you may thus need a steppingstone between tactics and strategy in order to succeed.

Usually it is the Russian General and military writer Alexander Svechin (1878–1938) that gets the honor of pinning this stepping stone on paper. He called it “operational art” and stated: “Studying the methods of conducting an operation is a job for operational art [. . .] On the basis of the goal of an operation, operational art sets forth a whole series of tactical missions and a number of logistical requirements” (Ydstebø 2012, pp. 421–425).

This idea can be illustrated by a simple model:



Simply put, Napoleon saw only one of the blue ovals at a time, hoping it would be the last one. Grant, on the other hand, saw, together with the President, the red circle, and tried to figure out where to put the stones to ford the river. And, finally, the Russians put these insights into words and doctrine.

After the Second World War, and particularly after the debacle in Vietnam, Western military thinkers tried to pick the best from German and Russian military thinking.

General Tukhachevskii had in 1926 indicated that you don't only need a new military skillset, operational art, but also a new level of command: "Battle in modern operations stretches out into a series of battles not only along the front but also in depth until that time when either the enemy has been struck by a final annihilation blow or the offensive forces are exhausted. In that regard, modern tactics of a theatre of military operations are tremendously more complex than those of Napoleon. And they are made even more complex by the inescapable condition mentioned above that the strategic commander cannot personally organize combat" (Naveh 1997, p. 10). In other words, you sometime need someone between the strategic commander and the battle captain.

## Operational Level of War

Even though the Napoleonic Wars, The American Civil War, and The First World War all suggested that something was needed in addition to tactics and strategy, it took quite a while for the operational level as a distinct field of knowledge to mature in the western world. It was as late as 1982 that the publication of US Army Field Manual (FM) 100-5, *Operations*, introduced the concept of an operational level of war, in addition to the tactical and strategic level (Naveh 1997, p. 12). And it was not until the 1986 revision of the 1982 FM 100-5 that the concept of "operational art" entered American doctrine.

The main reason for adapting operational art, and introducing a new level of war was, as mentioned, to cope with the vast numbers and distances involved in modern war. But there was also another reason, which does not depend directly on scale and size. As we never make war for war's own sake, but to reach political goals, we need operational art to assist strategy in order to reach something positive, i.e., our political goals, with something disruptive, i.e., military means. The operational level of command and operational art are necessary when the military side of the conflict becomes so complex that it can no longer be managed by the strategic command directly.

Now we have walked a rather long and winding road from Sun Tzu to US Army Field Manual (FM) 100-5, and the time has come to take stock. Not all readers of this chapter live in a member state of NATO, but the way NATO defines core concepts is not very far from the global military lingua franca, so to speak.

## The NATO Lingo

On its most generic level, NATO defines operations as: "A sequence of coordinated actions with a defined purpose" (NATO 2019). In the NATO vernacular, an operation

is thus a military activity that contributes to attaining a goal – an *end state* – as part of a wider approach that also includes nonmilitary actions (NATO 2019).

This is the first denotation of “operations.” It is the use of military means to reach a defined purpose. This in contrast to other military activities, as, for instance, administration, maintenance, and recruiting, which are not military operations, but means to support operations.

The second denotation of “operations” is connected to the concept of “operational art,” which is: “[t]he employment of forces to attain strategic and/or operational objectives through the design, organization, integration and conduct of strategies, campaigns, major operations and battles” (NATO 2019), where a campaign is a “set of military operations planned and conducted to achieve a strategic objective” (NATO 2019).

The third denotation of “operations,” or rather “operational,” is connected to a certain level of command. Between the tactical and the strategic level of command, there exists an operational level of command, which is: “[t]he level at which campaigns and major operations are planned, conducted and sustained to accomplish strategic objectives within theatres or areas of operations” (NATO 2019). This is usually the level of command where you find generals and admirals, who, as a rule, command joint and combined forces, i.e., operations with forces from more than one service (joint), and from more than one nation (combined).

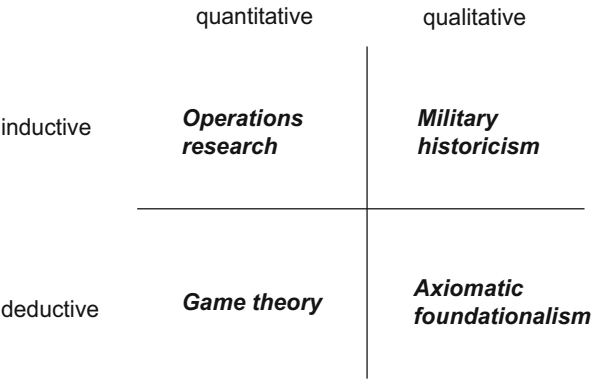
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## How to Study Operations?

The inner core of military activity, operations included, are, as stated by Clausewitz, human beings. In other words, military operations may be studied along the same lines as any other science studying human beings. And, as again stated by Clausewitz, since fighting is “a trial of moral and physical forces through the medium of the latter” (1976, p. 127), the study of operation also has to include the study of the use of technology and physical force.

The study of operations and operational art is thus not very different from the methods used in social sciences more generally, where it is impossible to test your hypotheses in a laboratory. Such work can in principle be based on empirical evidence, i.e., induction, or on the laws of logic, i.e., deduction, or a combination thereof.

The outcome of induction and deduction can then be presented either qualitatively or quantitatively, or again as a combination thereof. Consequently, the production, presentation, and evidential support of studies of military activities can, at least for the sake of argument, be placed in this model (Høiback 2013):



Different types of *operations research* are, roughly speaking, heuristic models of reality, often mathematical, that can be used to explain or foresee outcomes (Krepinevich and Watts 2015). Any system, such as the military, that can be modelled and broken down into smaller processes and structures can be explored by operations research. The limitation of the method is that it is fundamentally one-sided and reduces war to quantifiable variants.

*Game theory*, on the other hand, starts with mathematical models to describe interaction, where the symbolic language of mathematics allows for precision unattainable for qualitative methods. The limitation of this method is that it assumes that the decision makers are rational, which is not always the case. Sometimes decision makers are angry, vengeful, or just tired.

The *historical method* is by far the most common way to study military operations. In many ways, military thinking *is* elaboration on history: “We have early adopted a comprehensive study of military history and confidently left the strategy as a logical result of the former” (Alger 1982, p. 85). Military history has indeed often been produced for the sake of practical utility, as stated by J.F.C. Fuller: “Unless history can teach us how to look at the future, the history of war is but a bloody romance” (Strachan 1983, p. 1).

The main limitation of the historical method is, of course, that the part of the history we study may have no relevance for the future. The times have changed too much. As Howard stated: “an unintelligent study of military history which does not take adequate account of these changes may quite easily be more dangerous than no study at all” (Howard 1981, p. 13). And as Strachan points out: “It is [also] well known that military history, when superficially studied, will furnish arguments in support of any theory or opinion” (Strachan 1983, p. 2).

So everyone studying military operations via the historical route has to study it in *width*, i.e., take into account how war has developed over a long historical period, in *depth*, i.e., to study it thoroughly, and in *context*, as “[w]ars are not tactical exercises writ large” (Howard 1981, p. 14), but part of something larger, i.e., the society.

And finally, *axiomatic foundationalism* is study based on higher and more fundamental truths. Euclid’s classic *Elements* is a case in point, which starts with



definitions, postulates, and axioms that cannot be proved, only accepted. If, or when, the axioms are accepted, the theorems in the rest of the book follow logically. The British military theoretician Sir Basil Liddell Hart's (1895–1970) theory of the “Man-in-the Dark” is a succinct military instance of this axiomatic way of thinking:

To understand the few essential principles of war, as distinct from the mass of precepts and reservations with which the teaching of it is usually overloaded, we must simplify it and reduce it to the essential elements which are true of any fighting, whether between two individual men or two great national armies. Let us therefore examine the principles which govern the combat of two individuals. From the course of action which is correct in their case we can deduce the essential principles, and can then proceed to apply the latter to the conduct of war. (Liddell Hart 1920, p. 473).

The limitation of this method is that the practical relevance of the starting axioms can be miniscule.

So far, we have investigated very generic ways to study military operations. However, there is something worth saying specifically about studying operations, operational art, and the operational level of war. It is often very difficult to stay in line, so to speak. It is very easy to be pulled down to tactics, where all the action is, or up to strategy and politics, where all the interesting people are. That is not to say of course that strategy and tactics are irrelevant for military operations, but that the latter tends to be ignored in the shadow of the former two. Hence, the good books about the operational level of war are few and far between. John Kiszely, *Anatomy of a Campaign: The British Fiasco in Norway, 1940* from 2017 is one of the best and highly recommendable.

Even though operational art encompasses all kinds of military means, it is also important to remember that different domains and realms influence operations in different ways. Operations on land are different from operations at sea. And in the cyberworld, the realm itself does not even exist independently of human actions. Such issues will be the subjects of the subsequent chapters in this section of the *Handbook of Military Sciences*.

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## What Makes Operations Difficult?

As the military operations since 2001 have demonstrated, it is, the introduction of operational art and the operational level of command notwithstanding, still difficult to convert military prowess and dexterity into strategic gains. Why is that?

First, operations are based on the feasibility of deducing military actions from the goals of policy, but, as pointed out by Professor Strachan: “All this [is] entirely logical, but it [begs] a very important question: what would happen if there were no strategic goals?” (Strachan 2013, p. 216). Perhaps policy and military action do not go as well together as we often think? As stated by General (r) Jim Mattis:

In some cases, I could see what our policymakers didn't want to happen—we didn't want Israel attacked, didn't want Iran with nuclear weapons or mining the Straits of Hormuz, and

so on—but I couldn’t find an integrated end state we were trying to achieve: What does it look like when we’re done? (Mattis and West 2019, p. 194)

Generals could of course demand clear-cut end states from their political masters before they do anything, but that would be wishful thinking. Some problems are wicked. As stated by the former British Foreign Secretary Douglas Hurd to the journalist Max Hastings:

Your military friends, Max, should grasp the fact that often they won’t get the clarity of purpose, the fixed objectives they want. It may be necessary sometimes to take some action simply to avert a humanitarian disaster, and worry later about what comes afterwards. (Richards 2014: xi)

Military commanders and planning groups do not always get the *what* and *why*, and it is thus difficult to find the *how*.

Second, military operations are difficult because your opponent will try to *make* it difficult for you. Hence, you must subdue your opponent, in one way or another to succeed, but that is not the aim of the encounter, only a means. We fight *battles* in order to win, but we never fight *wars* in order to win, but in order to reach our political goals. Wars are not battles written large. Lucky are the politicians that have generals who understand the difference, for as Richard Betts points out: “To paraphrase Clausewitz, the *purpose* of war is to serve policy, but the *nature* of war is to serve itself” (Betts 2000, p. 37). Operational art has, in other words, a tendency to succumb to the nature of war, i.e., to subdue the enemy, rather than serve its purpose, i.e., to reach the end state, if there is one. The tail wags the dog.

Third, the concept of an operational level of command is also problematic. According to Strachan, the reason why the operational level of war became important in the USA in the 1980s, was because especially the U.S. Army sought to regain its self-respect. In the 1950s and 1960s, nuclear strategy had predominated, with civilian thinkers leading the discourse, and in the 1970s, the impression was that the U.S. Army had lost in Vietnam due to political meddling in military affairs. According to Strachan, with the introduction of an operational level of war, the U. S. Army created an area that was “a policy-free zone, in which military expertise was unfettered and where armies reasserted their authority over war’s conduct” (Strachan 2013, p. 213).

Consequently, operational art, as practiced on the operational level of command, has a sinister tendency to do the opposite of what is intended. Instead of pulling tactics and strategy closer together, operational art tends to push them apart. The operational level of command, with its strong commanders and heavy HQ’s, tend to unhinge political thoughts from military actions. If that happens, the political ambitions and the military action have no connection, and the operational level of war: “can be said to have destroyed strategy as it was” (Kelly and Brennan 2009, p. 86).

Since the USA introduced the operational level of war and adopted the concept of operational art rather simultaneously, it is easy to think that operational art takes

place at the operational level, but that is not necessarily the case. Perhaps it is better to talk about an operational *dimension* of war, rather than an operational *level*? (Howard 1983).

Fourth, operational art is particularly difficult in insurgency and guerrilla warfare, where smashing the armed forces of the enemy is barely relevant at all. In those cases, brilliant operational art, in the sense of brilliant orchestrating of our own military means, can inadvertently cause us to drive much deeper into the quagmire than we would have found ourselves without any skillful operational art at all.

Fifth, and finally, the word “art” in “operational art” is perhaps a misnomer. Military thinkers rarely get tired of discussing whether waging war is an art or a science, or perhaps both. That discussion is, as already seen, a dangerous one, because both art and science can be done in isolation. What war can *never* be, however, is an isolated act. Wars and combat *always* involve other people and other minds. Too often, however, we tend to forget that, as pointed out by Sir Michael Howard (1922–2019): “[T]he complex problem of running an army at all is liable to occupy his mind and skill so completely that it is very easy to forget what it is being run *for*” (Howard 1981, p. 13).

To conclude this part: Thomas E. Ricks’ statement, that “an ‘operational’ level of war” does not really exist (Ricks 2011), indicates that levels of war are a social construction. They only exist to the extent that we think they exist. However, the concept of an operational level of war, and the skills necessary to cope with operations, i.e., the operational art, are conceptual tools that may come handy, particularly if the next war is against a near peer opponent. But as with all other tools, it is important to use them properly. If we use them to isolate operations from policy, rather than integrating the two closer, we are worse off than without them.

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## Conclusion

According to Sir Basil Liddell Hart: “In strategy, the longest way around is apt to be the shortest way home.” (Liddell Hart 1967, p. 5). The aim of operations and operational art is to coordinate the practical military work necessary to walk the way pointed out by strategy to be the best way home, so to speak, and not get lost or starve to death on the way. This chapter has perhaps also been a rather long way around, but hopefully, you as the reader has found your way home, in the sense that you have a better grasp of the rather elusive concepts of military operations, operational art, and the operational level of war, or rather level of command, than you had when you left home.

We have met Carl von Clausewitz many times in this chapter. For god reasons. He is, somewhat flippantly perhaps, not only the best philosopher of war, but the only one. And he was also on the scent of pinning down operational art, as he wrote:

Strategy, in connecting these factors [geography, time and weather] with the outcome of an engagement, confers a special significance on that outcome and thereby on the engagement: *it assigns a particular aim to it*. Yet insofar as that aim is not the one that will lead directly to

peace, it remains subsidiary and is also to be thought of as a means. Successful engagements or victories in all stages of importance may therefore be considered as strategic means. (1976, p. 143).

Here “strategy” could be read as “operational art,” as operational art assigns particular aims to future tactical actions. Strategy is, in this perspective, “those objects that lead *directly* to peace” (Clausewitz 1976, p. 143). If tactics is about winning the battles, operational art is about conducting operations to gain the objectives set out by strategy to win the war in a way that will allow the government to win the peace, or rather to reach their political goals.

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## Summary

This chapter sheds light on the development of military operations. Military operations, as we use the term today, is a rather new concept, and the chapter starts out by investigating how the thinking about and conduct of military operations have evolved over the centuries.

As long as war has existed, people have commemorated fallen heroes and praised their deeds. However, it is not until ca. 400 B.C., in China, that we find the first attempts to systematize knowledge of past wars in order to win the next. Even if the ancient Greeks invented philosophy as we know it today, their military peers were little concerned with the systematization and justification of military knowledge. Not even the Romans developed a theory of military operations as we know it today. Niccolò Machiavelli’s *The Art of War* was also not a systematized theory as we now understand the concept.

The first significant military thinker who benefited from a scientific worldview, however rudimentary, was the Italian General Raimondo de Montecuccoli. The ensuing military enlightenment was characterized by four inclinations: totality, “pioneerism,” reductionism, and scientism. Antoine de Jomini (1779–1869) managed to tie all the loose threads of the military enlightenment into a comprehensive whole. The Prussian general and philosopher of war Carl von Clausewitz was the most prominent thinker who tried to break with the Jominian paradigm.

The vast spaces of modern war, and the astronomic numbers of soldiers and equipment involved, made another military skill necessary than those possessed by Napoleon. You need a steppingstone between tactics and strategy in order to succeed: *operational art* and an operational level of war.

Military operations may be studied along the same lines as any other science studying human beings. It can be based on empirical evidence, i.e., induction, or on the laws of logic, i.e., deduction, or a combination thereof. The outcome of induction and deduction can then be presented either qualitatively or quantitatively.

As the military operations since 2001 have demonstrated, even with the introduction of operational art and the operational level of command, it is still difficult to convert military prowess and dexterity into strategic gains. Military commanders and planning groups do not always get the *what* and *why*, and that makes it difficult to

find the *how*. The concept of an operational level of command is also problematic. Operational art, as practiced on the operational level of command, has a sinister tendency to do the opposite of what is intended. Instead of pulling tactics and strategy closer together, operational art tends to push them apart.

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# Concept of Sea Power

Torsten Albrecht, Konstantinos Tsetsos, and Philipp Grunwald

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## Abstract

In this chapter different perspectives on the concept of sea power are considered. On the one hand, sea power is defined accordingly, whereby it must be emphasized that sea power is not only composed of the number of ships or material but also of the degree to which it can influence and compel other countries/actors. The concept of sea power is then examined based on the International Relations theories of Realism and Liberalism. In order to understand the origins and also the development in the twentieth century of the concept of sea power, the most important cornerstones of the leading naval thinkers of the “blue-water school,”

T. Albrecht

Bundeswehr University, Hamburg, Germany

e-mail: [talbrecht@uni-potsdam.de](mailto:talbrecht@uni-potsdam.de)

K. Tsetsos (✉)

Political Science Institute, Bundeswehr University Munich, Neubiberg, Germany

e-mail: [k.tsetsos@unibw.de](mailto:k.tsetsos@unibw.de)

P. Grunwald

Bundeswehr University Munich, Neubiberg, Germany

e-mail: [philipp.grunwald@sicyon.de](mailto:philipp.grunwald@sicyon.de)



Alfred Thayer Mahan and Sir Julian Corbett, are presented. This work ends with a review of the concept of sea power during the Cold War.

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**Keywords**

Sea power · Naval power · Realism · Liberalism · Mahan · Corbett · Cold War · Maritime environment · Blue-water school

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**Introduction**

The importance of sea power, while appreciating other influences such as air power, is beyond doubt. Anyone approaching the subject of sea power from a historical perspective is reminded by a number of historical examples of the consequences of (non-)control of the seas. For example, the Phoenicians controlled the Mediterranean and were thus able to expand their trade, and the Ottomans were defeated at Lepanto, which led to the final collapse of their land forces. Continuing the view through history, for example with the efforts of the United States, Japan, Germany, and the Soviet Union to gain influence on the seas, one can find many more examples of the importance and relevance of sea power in the past, but also in the present (Gough 1988, p. 55). For in today's world, we must not forget that despite the many technical possibilities in all dimensions of military deployment, sea power has a fundamental value in terms of global influence. In times of globalization and, for example, the associated global trade routes, the importance of sea power, for example, monitoring these routes, is crucial. Many other facets of today's sea power applications can be enumerated, but finally, even with the technological progress of the twenty-first century, as history has shown, sea power is needed to determine the direction of continental and intercontinental development (Moore 1975, p. 15; Till 1984; Nailor and Bolton 1986). Based on the significance of sea power, it can be concluded that the consideration of the theory of sea power is important both historically and today. At the time of the late nineteenth century and early twentieth century, two classical theorists, Alfred Thayer Mahan and Sir Julian Stafford Corbett, in particular, came to prominence, who laid down the foundations and principles of maritime strategy. At these times, sea power meant the central means of controlling national activities and power projection over rivals. This categorization of sea power can no longer be matched by today's technological innovations. "But in the classical era of the battleship, these two strategists and historians of sea power labored to convince other of the value and utility of a nation-state possessing a sea-going capability that could fulfil and meet the national objectives of that nation-state in time of war" (Gough 1988, p. 55).

In the following, sea power will be defined and the changes the concept of sea power has undergone over time will also be discussed. On this basis, sea power will then be put into a theoretical context and it will be examined how Alfred Thayer Mahan and Sir Julian Stafford Corbett laid the foundations of sea power theory. This work is concluded with a consideration of the theoretical concept of sea power after the Second World War up to the present day.

In the following section of this work a definition of sea power will be formulated. It is interesting to note that Mahan himself, who coined the term sea power, did not give a final definition. Subsequently, sea power will be examined from various International Relations theory perspectives.

## Defining Sea Power

Finding an all-encompassing definition of sea power is difficult due to the following problems. Apart from semantic limitations of the English language and the question whether maritime terms do justice to all facets of sea power, the question also arises what exactly the “power” in sea power actually means. On the one hand, analysts focus on factors that make countries or people powerful (e.g., pure military strength). On the other hand, they also focus on the perspective of defining power by whether countries are able to let others do what they want. In other words, power can thus be represented in terms of potential or consequences (or both at the same time) (Till 2009, p. 20). A concept of sea power must include both views of power, the potential and the consequential view. The potential of sea power is defined by the presence and number of navies, coast guards, marine, and civil-maritime industries. The influence of these forces on land and air forces can also be mentioned here. Overall, it is therefore the civil and military potential that is defined by the number and availability of all types of personnel and material needed to use the sea (Till 2009, p. 21). However, as already indicated, sea power cannot be defined by the mere number of, for example, ships or personnel, but also by the degree of possibility to influence the behavior of other states. This refers on the one hand to the influenceable behavior at sea, but also to the influence one has on decision-making processes on land. As Sir Julian Corbett rightly said, sea power is not necessarily about what exactly happens at sea, but about the outcomes of the influence of sea power on land: “Since men live upon the land and not upon the sea, great issues between nations at war have always been decided – except in the rarest cases – either by what your army can do against your enemy’s territory and national life, or else by fear of what the fleet makes it possible for your army to do” (Corbett 1918, p. 67). In other words, it is not only relevant how sea power is executed at sea, but also how power from the sea affects behavior and processes on land. As pointed out by Geoffrey Till (2009, p. 21), sea power must be defined as input, that is the sum of the various naval and maritime-related assets, as well as output, that is, the ability to influence the behavior of other actors.

With these two sides of the definition of sea power, some derivations can be made immediately, which should be considered for the further consideration of sea power. On the one hand, it has become clear that sea power is not simply defined by the ships of a country, but also by the mutual understanding that other services have an influence on processes at sea and that the deployment of a navy also has an influence on processes on land or in the air. This is accompanied by the fact that sea power is not only to be considered through its purely military component, but that the nonmilitary aspect of the use of the sea is just as relevant for the determination of

sea power. Merchant fleets, the fishing industry, shipbuilding and maintenance, maritime research, or even the insurance business all have an influence on naval power and thus also influence in their own way the possibilities of influencing other states. On the other hand, it can also be deduced that sea power is a relative concept. In other words, some states have more sea power than others, and the question is only about the degree of difference, because almost all countries have some sea power, either based on the strength of the military or through, for example, shipbuilding skills or corresponding insurance companies in the sector. The decisive factor here is that sea power of one state can be significantly higher than that of other states. This difference has a significant impact on the strategic planning of states in peace as well as in war (Till 2009, p. 22).

The aspect of relativity is a meaningful derivation, since it allows us to approach questions of whether and to what extent a country can demonstrate sea power. However, it should be noted that this comprehensive definition of sea power means that virtually every state in the world has a certain degree of sea power. This also means that the size of the available sea power is not necessarily decisive for being able to operate at sea. If, for example, typical mechanisms are in place during a warlike conflict (e.g., attacks on ships or pursuit of battles), one can speak of the use of sea power. This can be applied in almost all states, regardless of size or form (Sater 1991). The relativity mentioned above also means that the effectiveness of sea power depends heavily on the strengths and weaknesses of the opponent. Sea power can have different effects in conflicts. In some circumstances, the use of sea power merely creates the possibility of winning the conflict on land or in the air; in other scenarios, sea power is the decisive factor for ending a conflict (Gray 1999, p. 217).

## **A Realist Approach to Sea Power**

From a Realist perspective, states are viewed as uniform actors or units. These units possess national interests and seek to selfishly assert themselves within a global and dynamic power game. This power game takes place within an anarchical international system in which every state is dependent on providing for itself and its own security. The primary function of each actor is to maximize either its power or security accordingly and thus to achieve the most important goal – the survival of the state – in the long term. Power and security naturally play a decisive role in achieving that goal. National security at the level of states must, however, be viewed from two sides since states are both the threatened objects and the threatening subjects in international relations. This aspect of threat arises from the military capabilities of other foreign actors/states (Devetak et al. 2011, p. 162). For Realists, the world and the events taking place in it are regarded as a zero-sum game. An actors' focus is on relative gains. From the perspective of Realists, two options can therefore be proposed for reacting appropriately to threats emanating from foreign states. On the one hand, states can establish their own national armed forces for direct defense and deploy them accordingly. On the other hand, there is also the option of participating in or forming coalitions in order to be able to counter potential

enemies in a balanced manner. In a Realist approach, alliances and partnerships are thus not the result of common ideological foundations, but rather the product of congruent specific interests of two or more actors at a given point in time. The goal of both options is to maintain the position of power and to be able to react to threats. Material forces, such as the deployment and use of armed forces, and their distribution within the international system are ultimately subject to a national cost-benefit analysis based on national interests (Devetak et al. 2011, p. 164).

During the Cold War, where security was always linked to the question of war and peace, the Realist approach dominated. Here, naval power was mostly investigated through naval studies, prepared by historians and strategists. Their focus was on naval forces as an instrument of states, and the sea as an environment was neglected. "From a Realist perspective, sea power is understood as a sum of assets, that is to say a powerful navy, an efficient merchant fleet (although today the states that possess the most powerful navies are no longer those that possess the largest merchant navies), and some invariable geographical factors which contribute to states' power" (Germond 2015, p. 7). Naval power here serves primarily to contribute to national and economic security at sea or from the sea. Maritime assets are used to maximize power through control at sea in order to satisfy national interests and to be able to pursue power politics. Thus, naval forces are traditionally considered an indicator of power and have also contributed to the reputation of states (Till 2009, p. 253). Even if quantitative indicators of navies, such as the number of ships or the performance of weapon systems, allow a ranking in which navies can be listed, from a Realist perspective, however, the relationship to other navies is more important than the absolute numbers of capabilities (Jackson 2010, p. 12). This naval balance between states has been studied by traditional naval researchers mostly on a technical, tactical, operational, or strategic level. For example, winning wars and achieving dominance at sea, including by waging decisive battles, were of central importance for classical writers such as Mahan or Corbett (Hill 1986, p. 35). Eric Grove (1990, p. 3) summarizes sea power therefore as a "form of military power that is deployed at or from the sea."

Global power equals sea power. Since Thucydides maritime powers, as a mean of maintaining the "balance of power," establish thalassocracies as agents of global power. This Realist perspective on sea power is highlighted by the arms race of naval forces before the First World War and during the Cold War. In both cases, the parties involved pursued the goal of building up powerful naval forces in order to be able to take a position of strength compared to their competitors in the event of aggression. This approach, after more and more ships and stronger weapons systems, was also pursued by Soviets during the Cold War, whereby the USA and NATO were able to maintain a favorable balance of power at sea despite great Soviet efforts. This ratio contributed to the downfall of the Soviet Union, as the economic burden of operating a navy of this size became a factor not to be underestimated. After the end of the Cold War, Realism regarding sea power was called into question due to the expansion of the concept of security. In particular, new threats such as terrorism at sea or piracy as well as new types of operations (humanitarian or peacekeeping missions) could not be explained by mere power considerations (Germond 2015, p. 8).

## Liberalism and Sea Power

Liberalism is the second school of thought that competes with Realism, emphasizing that liberal democratic states are not driven by egoism but rather force cooperation among themselves based on common goals—which go beyond mere survival. A parallel to realism is required when considering the international system. Liberalism also speaks of anarchy at the international level. However, cooperation is still possible here, since cooperation serves (economic) interests. There are thus interests that go beyond national security. Of particular importance is economic prosperity, which is achieved through market economy principles and free trade. Consequently, states should establish peaceful relations in order to create a free market and institutions/regimes that serve the spread of liberal norms and globalization on a global scale. International military cooperation should serve stability and prosperity and is thus a by-product of liberal thinking (Germond 2015, p. 8). Strachan sees a symbiotic connection between sea power and liberal democracy (2005, p. 38). This supports the argument that the development of navies and national agendas regarding the use of the oceans was favored by liberal democracies (Grygiel 2012, p. 33).

In contrast to Realism, sea power in Liberalism should be understood as something collective that drives the promotion of liberal norms and cannot be viewed solely in terms of national interests. This coincides with the aspect of the definition of maritime power already described – the possibility of shaping the behavior of others and thus also the international system. Maritime power offers the chance to spread free trade and liberalism through the control of the seas and thus to secure maritime common goods. This is also made clear in a document published by US naval authorities, which confirms that US sea power cooperates with others with the goal of creating prosperity and security (US Navy, Coast Guard, and Marine Corps 2007, p. 19). The influence and impact of sea power is emphasized and not the pure outreach of sea-going units in conflicts (Lindley-French and Straten 2008, p. 67).

As mentioned, a central component of Liberalism is free trade, which must be ensured by the freedom and security of the seas and trade routes. The naval forces serve as a means to this end within the framework of multilateral deployment. This multilateralism does not therefore represent an emergency solution – as in Realism – due to a lack of naval capabilities at the national level. Examples such as the deployment of multilateral naval forces in the Strait of Hormuz or the Persian Gulf support this statement. A special feature is the cooperation of the Chinese Navy with Western partners in the Horn of Africa. This shows that cooperation between liberal and non-liberal actors takes place in order to spread the liberal world order. This cooperation also includes the implementation of foreign interventions, if this can lead to regional stability and the dissemination of liberal norms. Following this approach, it must be recognized that sea power in Liberalism also contributes to the projection of power and armed forces. This is illustrated by the use of naval forces in operations such as those in Kosovo (1999) and Libya (2011). Sea power in Liberalism thus not only represents national security but also includes as goals the stability and spread of the liberal order, which are to be implemented through a variety of mission scenarios (combat operations, maritime diplomacy, combating piracy,

deterrence, etc.) (Germond 2015, p. 9). The school of Liberalism has been particularly present since the end of the Cold War but features of liberal principles relating to naval power can be found much earlier. Themistocles, Thucydides, and Xenophon (as well as Mahan) described the sea as a collective good. The freedom of the seas is essential for economic development and the prosperity of states (O'Tuathail 1996, p. 39). Oceans and sea power have been favoring globalization, which is why sea power is always accompanied by geo-economic goals (Tangredi 2002, p. 22). Liberalism has experienced a particular upswing since the end of the Cold War, however, because of the assertion of Western liberal values. Looking at current deployment scenarios, cooperation among naval forces is the norm at the international level.

China's rapid rise and the associated power-political aspirations of China have led to a revival of the view of sea power through Realism. The decisive factor in challenging the liberal approach is China's goal of having a navy capable of serving national interests. Since China is dependent on trade and, in terms of its energy security, also on the use of the oceans, China no longer sees itself solely as a land power but also as a growing sea power (Xiaoqin 2012, p. 75). Actions such as the launch of the first Chinese aircraft carrier have the potential to provide greater competition at the maritime geopolitical level. A potential maritime arms race with competitors such as India or even a potential clash with the USA, for example, through the conflict over Taiwan, reasserts a Realism inspired perspective on these areas of conflict (Brzezinski and Mearsheimer 2005). However, there also is cooperation between the USA and China. China's participation in the anti-piracy mission, for example, has shown that cooperation and some form of collaboration is possible.

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## Origins of Sea Power

This chapter presents the origins of the concept of sea power, which was significantly influenced by Mahan and Corbett. Both are the leading naval thinkers of the so-called blue-water school. Mahan, "the father of modern naval history" (Moll 1963, p. 132), pursued a historical approach to the analysis of sea power in order to create universally applicable rules, rather than a theoretical one. Corbett was primarily concerned with the effectiveness of sea power during conflicts.

## Mahan's Principles of Sea Power

In reference to land warfare, Mahan emphasized three principles that are of crucial importance: first, he stressed the inherent value of a strategic central position, emphasized the principle of concentration, and saw a crucial relationship between logistics and combat (Crowl 1986, p. 456). For Mahan, the strategic value of a place is defined by the position/situation, the military strength (offensive/defensive), and the resources available at the place. He concludes that taking a place of great strength may not be worthwhile due to weaknesses in its strategic lines or lack of resources.

As mentioned, Mahan emphasizes the inherent value of a central position, but not in its absoluteness. He sees the central position as a supporting element that exists alongside many other supporting elements. Thus, the benefit of a central position is very limited when there is a stronger enemy on both sides (Mahan 1911, p. 32). So, such “a position does not give also the most men needed to complete the familiar aphorism. The position in itself gives no large numbers, and when left it serves only the defensive purpose of a refuge, a base of supplies, lines of communications. A central position cannot be carried to the field or as reinforcement” (Mahan 1911, p. 55).

According to Mahan, victory at sea is only possible through an appropriate fleet concentration, which is accompanied by the fact that the fleet is never divided (Gough 1988, p. 56). According to Mahan, this concentration of fleets is the most important instrument of naval warfare. Concentrated fire on the enemy fleet should be the main means of the battle fleet to exercise sea power (Crowl 1986, p. 458). Under this central principle of concentration, Mahan summarized all strategic and tactical considerations for achieving military efficiency in war, ignoring intermediate operational levels in keeping with the spirit of the times (Vego 2009, p. 2).

The third principle, the connection between logistics and combat, was of central importance to Mahan due to the technological events of his time. Naval bases were indispensable because ships powered by steam were not able to cover a considerable distance without stopping. The logistic supply by far-away coaling stations became a necessity in order to be able to sail and operate beyond home waters in times of war. A successful maritime strategy was not possible without these logistics (Crowl 1986, p. 460). This is accompanied by the supply lines that Mahan called the most important strategic lines. He defined them “as a line of movement through which a military body is kept in living communication with the national power” (Mahan 1913, p. 33). These are not geographical lines but lines that must be followed to transport supplies (fuel, ammunition, and food) to the naval fleet (Mahan 1913, p. 33).

Beyond these three principles, there are other essential points. For Mahan, the separation between the navy, an element that always had to be deployed strategically/tactically offensively, and the coast guard, a defensive factor, was very important (Mahan 1913, p. 458). This separation was based on the consideration that the defense of ports would limit the offensive power of the fleet. Furthermore, he sees this distinction supported by the fact that the fleet should maintain its mobility, while defense is always characterized by immobility (Alfred T. Mahan 1911, p. 459). Furthermore, there were two main methods for him to gain and maintain command over the sea: the decisive battle and the blockade. The main task of the fleet was to attack the enemy fleet in order to destroy the enemy and gain control over the water. This could only be achieved by a decisive and clear victory in the form of a decisive battle. These considerations led to the fact that during the First World War many navies neglected operational warfare but relied on tactics and technology to win the decisive battles (Vego 2009, p. 3).

A tight blockade can still lead to the detention of merchant and even naval ships in their own ports. He was aware, unlike many of his contemporaries, that the



development of submarines would make tight blockades more difficult, so a greater distance between the blocking ships and the blocked ports had to be taken. However, this long-distance blockade would be made possible by an increased demand for ships, so technical progress does not change the basic principle of the blockade (Mahan 1913, p. 3).

In retrospective, Mahan's elaborations were adopted relatively uncritically and were followed dogmatically. The reliance on the superiority of large ships (so-called capital ships) in major naval battles was used as a basis for the construction of navies. Mahan's indications that convoy, for example, was an effective method of protecting shipping were practically ignored for a long time (Bowling 1980, p. 2).

Mahan's ideas about the importance of the battle fleet and the decisive battle were uncritically adopted by his interpreters. This blind acceptance had the consequence that the great navies of those days gave priority to capital ships. The number and technology of the dreadnought class ships was defined as a decisive factor for future conflicts in order to achieve command at sea by winning a decisive naval battle. This link between naval battle and command of the seas had been established by Mahan in historical studies covering the period between 1660 and 1783 and was widely accepted. The strategic dimensions of the early twentieth century and the extent of a worldwide industrially based war were not recognized (Kutz 1989, p. 8).

Mahan's principles were applied during the First World War. Especially the Germans were convinced of the concept of the great decisive battle, although Mahan had never considered other possibilities of naval warfare such as cruiser wars or amphibious landings as useless. Options such as attacking British naval trade to weaken the enemy or preventing the landing of British troops in France did not receive adequate attention. The central problem of the Germans was that they did not pay sufficient attention to the value of the maritime position for a successful deployment on the open sea. Thus, German ships were prevented by the Allies from reaching the open waters of the Atlantic. With the stopping of German deep-sea traffic, the fleet was no longer able to prevent a British sea blockade (Vego 2009, p. 5).

Even after the First World War, the US Navy concentrated on building a strong combat fleet. The majority of the naval leadership was focused on material and it was assumed that smaller ships such as destroyers could be produced relatively quickly in case of emergency. Tactically, too, the emphasis continued to be placed on major decisive battles, as they were preparing for the same ones with the Japanese in the Pacific. The Japanese side followed similar views, and many Japanese admirals were also followers of Mahan. Aircraft carriers and submarines were regarded as auxiliary forces for the capital ships that formed the core of the navy. On the Japanese side, there was only a small group of admirals who believed in the aircraft carrier as the ship of the future. This group was not influential enough to achieve changes in naval doctrine until the beginning of the Pacific War in 1941 (Bowling 1980, p. 308).



## Sir Julian Corbett and Sea Power

Corbett, a lawyer and writer and thus the only civilian in the ranks of blue-water naval thinkers, sees the navy and its strategic deployment as an integral part of the art of war. With Clausewitz' concept in mind, he sees the strategic and tactical deployment of fleets not as an end in itself but to achieve corresponding goals in war and thus political ends (Gough 1988, p. 58). He was the first theoretician to deal with a strategy for an inferior sea power in conflict with a continental power. Further, he was a thought leader on the direct contribution that maritime strategy can make to a war on land (Vego 2009, p. 6).

Corbett divided maritime strategy into two types: first, the major strategy that dealt with the purpose of war. This also included a consideration of international relations and economic functions. The second was the minor strategy, which dealt with the actual aspects of warfare. Here, the planning and conduct of army and navy operations (and also combined operations) are considered (Gough 1988, p. 58). Corbett made a further distinction between maritime and naval strategy. The maritime strategy plays a superior role in the sense of planning the mutual relations between army and navy within a war plan. Only on this basis can a naval strategy, that is operational warfare at sea, be planned in order to deploy the fleet in the best possible way for the missions defined in the maritime strategy. Corbett was aware that a war cannot be decided by winning naval battles alone, as this would only involve a long process of exhaustion of the enemy (Corbett 1918, p. 12).

Central to Corbett was the goal of naval warfare: to gain and maintain command at sea while preventing the enemy from gaining it (Grove 1990, p. 12). Corbett equated command with the control and maintenance of commercial and military lines of operation, communication, and supply. "Thus, to keep open 'lines of operation' and 'lines of communication' offered the strategic objective for which the navy would function. Supply lines, running from bases to theatres of operations, lateral lines linking theatres, and lines of retreat, that is, supply lines in reserve – these were the avenues of war" (Gough 1988, p. 59).

According to Corbett, maritime operations cannot be viewed in the same way as the rest of military operations. The fundamental difference is that in land warfare, an attempt is made to take over the enemy's territory, while in sea warfare the focus is on the control of "communication," that is the control lines of operation, communication, and supply. Outside the territorial waters, the sea is not owned by anyone, so maritime communication is the same for both warring parties. This means that offensive and defensive planning of operations must take place at the same time, since it is usually impossible to attack an enemy without defending oneself. The sea is still not capturable to the same extent as on land, because it is not possible to keep the troops at sea as it is possible on land. And even if there is local control, the fleet is ultimately forced to find and fight the enemy fleet (Corbett 1918, pp. 78–80).

Similar to Mahan, for Corbett, obtaining command of the sea, that is, control of the aforementioned communications, was possible through battles and a blockade (or both). The sense behind all these measures always depends on the political conditions that make this control of the sea possible. For this purpose, not only

offensive but also defensive measures such as the protection of civil shipping could be used (Vego 2009, p. 7). At the same time, according to Corbett, the command over the sea can be threatened by hostile, smaller tactical actions or even the deployment of the enemy fleet. The defense against the invasion of the enemy, the attack on the enemy, and the defense of one's own maritime trade as well as the support of one's own military expeditions are the decisive factors for the exercise of a maritime command (Corbett 1918, p. 149). It can be clearly seen that Corbett mixes the offensive and defensive tasks of the navy in the exercise of the naval command. Corbett also sees in this context task fields such as the attack and defense of naval trade, which must be carried out continuously for the entire duration of a war by both parties, including the weaker sea power. The example of the defense of one's own shipping clearly illustrates this mixture, since the actual defensive task also has an offensive character; the attack and destruction of the enemy fleet always leads to a better protection of one's own shipping (Vego 2009, p. 7).

Corbett did not see the classic occupation of territories in terms of command at sea. He defined the power of command with freedom of movement of one's own fleet without hindrance or resistance, while at the same time restricting the enemy in his freedom of movement. However, in his view, the most common condition at sea is that neither side is in command. If one side should lose command, this does not automatically transfer to the other side (Grove 1990, p. 12). In other words, this means that a war between two opponents at sea is a battle for the power of command, which is usually controversial. In order to change this state of affairs, sea strategists deal with measures for the fleet to gain command. Should one side win command, the pure sea strategy is over for the other side that has lost (Corbett 1918, p. 77).

Compared to Mahan, Corbett looked at the actual leadership at sea in much more detail. Command of the sea had to be considered in various states and forms in order to enable the development of a war plan accordingly. In doing so, he differentiated the command at sea, both spatially (general and local) and temporarily (permanent and temporary). A general command can be permanent or temporary, while a local command, on the other hand, can only be considered temporary, since the enemy should always be able to interrupt the deployment of his fleet from other locations. He even goes so far as to say that no degree of superiority protects against sporadic attacks by detached cruisers or raiding squadrons, provided that they are prepared to take a correspondingly high risk and risk their own destruction (Corbett 1918, p. 90).

According to Corbett, a decision must be obtained to gain control of the sea. However, unlike Mahan, he did not always consider a decisive battle to be necessary. Corbett wrote in this respect that "under certain conditions, therefore, it may not be the primary function of the fleet to seek out the enemy's fleet and destroy it, because general command may be in dispute, while local command may be with us, and political or military considerations may demand for us an operation for which such local command is sufficient, and which cannot be delayed until we have obtained a complete decision" (Corbett 1918, p. 214).

Contrary to Mahan, Corbett held the view that fleet concentration need not be a fixed element, but that wars at sea are fought through strategic combinations and decisions that require a degree of flexibility and freedom of movement. Victory can

only be won by prudent use of the greatest risk, that is, the division of the fleet. This flexible approach ensures that one can hide one's own intentions from the enemy for as long as possible and allows the Navy to adapt to the previously drawn up operational plan (Corbett 1918, p. 115). Without a division, flexible operations on a strategic level are not possible on a dynamic battlefield like the sea. As mentioned above, this approach involves risks (as well as factors such as the enemy's resources or even the weather, on which one has no direct influence), but these risks are necessary to achieve success. If you follow the approach of concentration, the enemy is much clearer about what the further intention is, and you deprive yourself of flexibility. Corbett wrote: "the further from the formation of the ultimate mass we can stop the process of concentration, the better designed it will be" (Corbett 1918, p. 120).

## Changes After the Second World War

Already during the Second World War, new considerations began to be verbalized on a tactical and strategic level. As early as 1943, the first ideas of a common military culture within a holistic framework were being considered, so that a grand strategy for achieving victory could be developed by using all available means (Mortensen 1987, p. 15). In concrete terms, the Second World War ended the era of the great battleships, which of course also had strategic and tactical implications and further developed the complexity of joint operations, that is, uniting all branches of the armed forces (Torres 2013, p. 718).

The beginning of the Cold War marked a security environment that was considered the basis for naval planning and was characterized by a bipolar structure of two different political systems and alliances (NATO and the Warsaw Pact) (Smith and Uttley 1999, p. 1). The technological advances that came with the times, such as the nuclear revolution and the development of supersonic aircraft, made naval theorists increasingly abandon Mahan's views and focus more on Corbett's maritime strategy, that is, the interplay between air, land, and naval forces (Heuser 2010, p. 275). This was followed by a further development of the concept of command at sea toward a strategy of naval control, which had the goal of "connote more realistic control in limited areas and for limited periods of time (...)" (Heuser 2010, p. 274).

In the interwar period, the usefulness of a strong navy was questioned because of its vulnerability to air attacks. Furthermore, it became clear that the danger of nuclear aggression was too great for a naval ship, so the navy was superfluous. Admiral Sir Herbert Richmond countered the first argument as early as 1934 by arguing that airplanes are also corresponding instruments of a naval power, since they embody weapons that can be used in such a way that they enable control of the sea. Furthermore, he considered the danger from air to be less than from enemy ships. In addition, he justified the necessity of the navy by stating that a fleet that could be deployed in a certain area for a longer period of time and with greater effectiveness in virtually any weather outperforming the capabilities of aircrafts (Richmond 1934, p. 117).

Regarding the second argument of the nuclear threat, it can be stated that with the technological development of nuclear-powered submarines, which are also equipped with nuclear missiles, sea power has been given a role in a possible nuclear war (Heuser 2010, p. 293). It is fair to say, however, that in such a doomsday scenario the remaining naval forces (and many air and land forces as well) could only take on the role of auxiliary and rescue forces (Gretton 1965, p. 97). Because of this increasingly dangerous scenario, which of course resulted from the bipolarity of that time, a new concept of sea control was developed at the strategic level, which should be able to provide deterrence (by punishment or denial) against a nuclear attack (Till 2009, p. 292). Despite this concept, the vulnerability of naval forces to, for example, missile attacks, remained, so a key question was how well naval forces could adapt to (technical) changes during their lifetime (Friedman 2001, p. 244).

Within the concept of sea control, the naval forces take on different roles. Naval forces have three main functions – military, diplomatic and police – with which the navy fulfills its purpose. Of course, the military function is in the foreground, since the naval forces are accordingly geared to perform tasks such as strategic deterrence and thus power projection, coastal defense or the defense of civilian shipping (Grove 1990, p. 233). The role of diplomacy is not new and has occurred again and again historically, since diplomatic relations have usually always been linked to the line of communications between countries. Joint exercises or supporting partners within the alliances are examples of how naval diplomacy is applied. The third function, the police function, can also be compared to a constitutional role, since “the navy can maintain national sovereignty, protect national resources and, of course, preserve international peacekeeping” (Torres 2013, p. 720).

The adaptability and the ability to perform several of the tasks practically simultaneously set the naval forces apart from the rest of the partial armed forces. The various roles can be changed within a short period of time in order to be able to react flexibly in line with the strategy and adapted to the situation. A further advantage of naval forces is their ability to move freely in the world’s oceans; the only restrictions are of a geographical nature or the territorial waters of the respective countries. Otherwise, naval forces can move freely and without local permission. This is not the case with, for example, ground-based air forces and armies, since they need either negotiations, allied territory, or the seizure of operational areas in order to be able to act accordingly (Friedman 2006, p. 41). A further advantage of naval forces is, as Richmond (1934, p. 117) has already correctly recognized, that naval forces can maintain a presence for a long time and are thus able to carry out patrols for much longer than air forces alone. Naval forces are also technologically superior to air forces in terms of transporting large units and equipment in large quantities to the area of operations (Torres 2013, p. 720).

In order to do justice to all these roles and also to organize the cooperation between the individual branches of the armed forces, as already discussed by Corbett, the naval forces (like the other branches) are subject to continuous technological progress. With their beginnings in the Second World War as support units, aircraft carriers or carrier battle groups today represent the technological pinnacle of how multi-role naval forces can be operated. More than almost any other unit of

armed forces, carrier battle groups combine strong offensive and defensive capabilities (Friedman 2001, p. 256). Aircraft carriers enable joint operations across the various branches of the armed forces and combine sea control with air superiority. This combination makes it possible to provide effective support for amphibious troop formations while at the same time maintaining a large tactical range. The composition of the carrier battle groups ensures a high degree of security against enemy attacks. Today's aircraft carriers are so far advanced in their technological development that they practically act as a mobile base (and airport) and are thus considered sovereign, mobile territory (Friedman 2006, p. 42).

## **Different Levels of Maritime Engagement**

In order to give the supposedly abstract concept of Sea Power an even more practical reference, the levels of today's maritime operations will be briefly discussed below. For Corbett, the strategy also included the operations of a naval campaign. The American Admiral J.C. Wylie put it this way: tactics are in effect when there is contact between one's own and enemy forces, which is why all plans and operations are tactical. Everything else is strategic (Hughes 2012, p. 24). Today, however, there is a corresponding division of levels – strategic, operational, tactical – in maritime operations. The highest level is the strategic level, where nations (often embedded in multinational alliances such as NATO) define national and multinational objectives, guidelines, and the appropriate use of military and other instruments.

This is followed by the operational level, which has the purpose of combining national or military strategic objectives with the corresponding tactical deployment of the armed forces, including the naval forces. It is at this level that operations are planned and carried out to achieve objectives within theatres of war and also in other areas of operation. This implies a larger time and space frame than at the tactical level, since it is here that the corresponding intermediate operational steps to achieve the strategic goals defined.

The level of battles and combats, that is, the deployment of, for example, naval forces, forms the tactical level for achieving military objectives defined by the operational command. Here it is primarily about the orderly formation and maneuvering of the corresponding units in order to achieve combat objectives against the enemy. The tactical objectives form the individual steps toward the operational objective, with the totality of the operational objectives forming the strategic objectives.

Despite this definition of the different levels, the transitions between the levels of a war are fluid, as units or, for example, types of equipment do not have to be assigned to a specific level. One example of this is reconnaissance and communications satellites, which used to be deployed exclusively at the strategic level, but which today also represent a crucial component of tactical operations.

Naval forces and naval bases can also be deployed at all three levels to achieve strategic, operational, or tactical objectives. One example: In the Second World War, a war in its entirety on a strategic level, battles were fought on an operational level, for example in the Pacific region, which in turn were fought on a tactical level by naval forces (and also air and land forces) in the corresponding battles on the ground. The victories at the tactical level in the many battles fought by, for example, naval forces enabled an overall victory in the Pacific region, which in turn was decisive for the strategic victory of the Allies (US Navy 2010, pp. 17–18).

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## Summary

Finally, it remains to be said that the concept of sea power has been subject to change and constant further development over the decades. The historical significance of sea power was mentioned at the beginning of this chapter, and its relevance during the twentieth century was sufficiently demonstrated. Sea power will not lose relevance in the twenty-first century as the concept shows its relevance for International Relations when viewed from different perspectives (such as Realism or Liberalism). It can rather be assumed that the value of sea power will increase to the same extent as the world trade with the means of transportation by ships will grow in the center of the world trade system. This will inevitably have an impact on the role and significance of naval forces. It can be said with certainty that – regardless of the individual task, be it support for police tasks or defense of one's own waters – the naval forces and the concept of sea power will continue to develop and become increasingly important.

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# Postmodern Air Power and the Western Way of War

Frans Osinga

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## Abstract

Arguably, while the Western way of war has come to be defined and dominated by the employment of advanced airpower capabilities, how airpower is generated, which logic and considerations inform air operations, and which command processes are involved in planning and conducting air operations are generally poorly understood. Through the lens of the evolution of air warfare, this chapter offers a discussion of air operations: those activities that produce air power. Informed by a Western perspective, it traces the evolution of air power through the decades of interstate warfare to the first decade after the Cold War. These

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F. Osinga (✉)

Netherlands Defence Academy, Breda and Leiden University, Leiden, The Netherlands

decades of experience spawned current procedures for conducting air operations. This is followed by an overview of developments since 9/11, showing how air operations are now effective in engaging small groups of non-state actors. It concludes with signifying what, as a result of advances in the past three decades, is currently considered the potential military and political value of precision age air operations.

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**Keywords**

Air command and control · Targeting · Precision age airpower

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**Introduction**

The US military defines an operation as both “a sequence of tactical actions with a common purpose or unifying theme and a military action” and “the carrying out of a strategic, operational, tactical, service, training, or administrative military mission” (DoD 2020, 159). Applying these definitions loosely, air operations may be described as military actions involving surveillance and defense of air space, intelligence collection, the logistical and maintenance preparation of combat aircraft to make them ready for employment, the actual tactical planning and execution of individual aircraft sorties that, alone, or in combination with other aircraft, execute a particular mission, as part of a larger series of missions during a day, which are all part of the particular phase in a larger sustained air and joint campaign which aims to achieve strategic objectives and where a phase may focus on achieving a mid-course objective such as air superiority. Such activities generate air power, which in turn can be defined as the ability to use air capabilities in and from the air, to influence the behavior of actors and the course of events. Or, to paraphrase US Air Force doctrine, “the ability to project military power or influence through the control and exploitation of air [...], to achieve strategic, operational, or tactical objectives” (USAFa).

Arguably, while the Western way of war has come to be defined and dominated by the employment of advanced airpower capabilities, how airpower is generated, which logic and considerations inform air operations, and which command processes are involved in planning and conducting air operations are generally poorly understood. Through the lens of the evolution of air warfare, this chapter offers a discussion of air operations: those activities that produce air power. Informed by a Western perspective, it traces the evolution of air power through the decades of interstate warfare to the first decade after the Cold War. These decades of experience spawned current procedures for conducting air operations, which is followed by an overview of developments since 9/11, showing how air operations are now effective in engaging small groups of non-state actors. It concludes with signifying what, as a result of advances in the past three decades, is currently considered the potential military and political value of precision age air operations.

Airpower in Interstate Wars

World War I and the Emergence of the Airman’s Perspective

During WWI the now familiar distinct roles of air power were fleshed out: reconnaissance, air defense, air transport, air support, interdiction, and strategic attack. In addition to conducting reconnaissance and attack missions over the battlefield, this new instrument provided a unique and novel approach for direct attack on enemy rear zones, cities, economies, and civilian populations (Buckley 1999; Olsen 2010a), and a potential way to avoid bloody prolonged battles on the ground (Table 1).

The addition of the third dimension to war changed the character of war radically because of its unique characteristics. As contemporary air power doctrines explain (NATO 2016a, 1–2, 1–3), nicely capturing the characteristic airman’s perspective, air power is pervasive, as aircraft are rarely physically constrained by national boundaries or terrain. Three core air power attributes – speed, reach, and height – enable and enhance air power’s additional attributes of ubiquity, agility, and concentration. Ubiquity results from air power’s reach which creates the sense of being everywhere all the time. This enables employing air power to pose or counter threats simultaneously, and across a far wider area than surface capabilities. Agility refers to the fact that air power can quickly switch the point of application within and between operational theatres, sometimes during the same mission, and create tactical to strategic effects in a variety of air power operational roles. Agility also means a commander can easily scale the scope of operations up or down in response to a change in political guidance or political strategic objectives. Third, concentration: compared to land and maritime power, air power’s speed and reach enable a commander to concentrate military power more responsively in time and space where it is required.

Early airpower theorists recognized these embryonic attributes. Technological and scientific developments – aerodynamics, metallurgy, engines, radio, photography, electronics for instance – fueled speculation that long range bombers would be

**Table 1** Generic definitions of counter-land air power roles (RAF 2017, 43–44)

Definitions of key counter-land air power roles
Close air support (CAS) is the action taken to disrupt, degrade, deny, or destroy enemy activity or capabilities which are in close proximity to land forces. Intensive air-land integration and coordination is critical to accurately identify targets and minimize the risk of fratricide. Close air support can be crucial to the success or survival of land forces
Air interdiction (AI) is air operations conducted to divert, disrupt, delay, degrade, or destroy an adversary’s military potential before it can be brought to bear effectively and at such distance that detailed integration of each air mission with the fire and maneuver of friendly forces is normally not required
Strategic Attack operations are aimed at an adversary’s fundamental ability to wage war, by attacking their structures or organizations. Targets may include centers of gravity, such as leadership and command elements, critical war production resources, or key supporting infrastructure. In this context, “strategic” describes the effect, not the location or distance to the target, or type of weapon system or delivery platform

almost unstoppable, and could strike directly at government centers, civilian population, and key industrial nodes, thus serving as an effective deterrence instrument. Such severe attacks, and the expectation of more to come, would suffice to convince either the population to revolt, the enemy government to cease the war, or make it impossible to sustain a long war. Not the occupation of territory – the preserve of armies – but the side that dominated the skies would be victorious. A bloody attritionist trench war of WWI could thus be avoided.

Achieving command in the air would therefore be the key to success or failure in future wars. In a time where fighter aircraft were slower than bombers, early warning through radar was still unknown, and Western interbellum politicians were war weary, this argument was at least theoretically convincing while also serving the aim of the theorist to establish independent air forces. If airpower was to be employed effectively, these scarce capabilities should not be commanded by, and distributed across tactical ground units, but directed by a dedicated air command organization in a centralized manner in a well-developed air campaign where strategic, operational, and tactical demands for air operations could be prioritized (Meilinger 1997; Faber 2015).

## World War II

Yet, during WWII air power integrated in an overall joint strategy dominated air operations. The initial German successes relied on close tactical integration of land and air operations. Air superiority and success in defensive air warfare proved pivotal for the survival of Britain (due to the advanced air defense system connecting early warning radar with air operation centers and fighter squadrons) and for the defense of shipping convoys against German submarines in the Atlantic. Air Superiority, Air Interdiction missions that it enabled, and Close Air Support provided through well-established air-land coordination procedures, proved keys to Allied success in North Africa, the successful Allied invasion in France, and the subsequent advance into Germany, and for the Russian advance to Berlin.

These campaigns demonstrated that air warfare involved attritionist dynamics. As long as the opponent could operate sufficient numbers of aircraft, air superiority was not a given but could only be achieved temporarily and locally. Sophisticated air defense systems, with fighters directed by radar operators toward enemy formations, could wreak havoc among bomber forces resulting in massive and unsustainable attrition rates that sometimes exceeded 10% of a bomber formation. More than land-warfare, the fight for air superiority over Germany evolved into a technological and tactical innovation contest involving radar-jamming techniques, night precision navigation systems, and the development of long range fighters that could escort bombing formations. High attrition rates among German fighters resulted. In the later stages of the war, attacks on German airbases sealed the fate of the Luftwaffe.

Air power also revolutionized maritime warfare. Japanese and American aircraft carriers demonstrated the vulnerability of ships to massed air attacks. The battleship was replaced by the aircraft carrier as the capital vessel in naval warfare. Joint

warfare in the Pacific also revolved around airpower: the American island-hopping strategy to defeat Japan centered on obtaining airbases for fighters, which would support the amphibious attack on the next island, and for strategic bombers, that could strike the Japanese homeland.

Strategic bombing certainly had a major impact on WWII, but not necessarily the way envisioned by the early air power theorists. While justifiably critiqued ever since by legal scholars and ethicists (Garret 1993; Biddle 2002; Grayling 2006), the strategic logic of those horrific attacks can be understood in the context of total war and in light of interbellum strategic thinking. Civilian populations were more or less considered legitimate targets. The crippling shipping blockades of WWI had served as precedent, as had the German bombing raids on cities such as Rotterdam, London, and Coventry. Second, aerial bombing offered one of the few options to strike back at Germany in the early stages of WWII, and it sent a supportive political signal to Russia that was suffering massive losses on the Eastern Front. While not designed to be decisive on their own, strategic attacks contributed massively to allied success by crippling the German war industry (Overy 1981), diverting scarce frontline resources to the defense of the German homeland and by causing the defeat of the Luftwaffe which paved the way for the Allied advance into France (Buckley, 166). The Japanese surrender following the dropping of the two atomic bombs by B-29's is also a dramatic testament of the effects of strategic attacks, and they highlight how air warfare had changed war and strategy. Losing air control meant catastrophe for a country's cities, its industries and population, and its armed forces.

## The Cold War

The East-West confrontation drove air power development post WWII. In addition to an attritionist conventional air war over Europe, the threat of mass destruction inflicted upon city centers and military complexes by bombers and intercontinental ballistic missiles dominated strategy and security policy. Air forces focused intensely on the rapid pace of technology advances (engines, avionics, sensors) that resulted in a series of increasingly capable and complex combat aircraft capable of flying at supersonic speeds and high altitude, often specialized in single roles such as intercepting high flying strategic bombers. Advances in radars and missile technology (infra-red and radar-guided) increased intercept ranges. Specialized aircraft were developed for identifying enemy electronic emissions and suppressing the increasingly capable radar-guided ground-based air defense systems (the so-called SEAD role). Air-to-Air Refueling aircraft (modified civilian airliners) were introduced extending the range and endurance of bombers, transport aircraft, and fighters. Strategic and theater transport aircraft with increasing capacity ensured rapid massive reinforcement options in times of crises from the USA to Europe. Maritime patrol aircraft benefited from technologies that enabled detection of submarines in the vast oceans such as the Atlantic.

The defense of the Inner German Border weighed heavily on air power developments (McCrabb 1997). Air defense was a major priority for NATO and reflected the

wars for air superiority of WWII, the Vietnam War, and the Israeli experiences of 1967 and 1973. With ground troops facing a numerically superior opponent, control of the air – denying its use to the enemy – was essential. Doctrine recognized two degrees of control of the air: (1) air superiority which refers to a local and temporal degree of dominance in the air battle which permits the conduct of operations (by maritime, land, and air forces) at a given time and place, without prohibitive interference by the opposing force; and (2) air supremacy which is achieved when the opposing air force is incapable of effective interference. Both would require a persistent campaign of counter air operations comprising two key missions: Offensive Counter Air (OCA) and Defensive Counter Air (DCA). OCA targets enemy air capabilities as close to their source as possible, seeking to dominate an adversary's airspace, and preventing the launch of threats against one's own forces by striking air assets and command facilities on the ground. DCA is generally reactive in nature and seeks to nullify or reduce the effectiveness of enemy air and missile threats. Active defensive measures involve a system of layered defense-in-depth using reactive air-to-air fighters, surface-to-air missile (SAM) systems, and additional aircraft placed on ground or airborne alert. Passive measures include the defense and protection of friendly forces through early warning; camouflage, concealment, or deception; hardening, dispersal, or low observable "stealth" capabilities (RAF 2017, 27–29; NATO 2016a, 1–8, 1–9).

The second primary role for air forces was air support to ground units which aims to defeat an adversary's fielded forces, destroy their supporting infrastructure, or generate psychological effects to shatter their cohesion or will to fight. While Close Air Support and Battlefield Air Interdiction were considered necessary but also ineffective and wasteful in light of the capabilities of modern surface to air missiles, NATO doctrine expected airpower to play a major role in stopping Warsaw Pact ground advances on or near the frontline. In order to circumvent air defense systems, aircraft such as the F-111 and Tornado were designed for flying extremely low, and fast (also during night) to conduct AI and OCA missions against targets deep in the enemy rear area. Others were ruggedized, such as the robust A-10, designed for attacking enemy armored ground units in the front line. Precision weapons were gradually introduced, their costs and limited numbers restricting their use against high value targets only. In the later stages of the Cold War multi-role aircraft such as the F-16 replaced single role systems thereby increasing the flexibility of available air power assets for a commander.

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## **Airpower in Interventions 1990–2000**

### **Operation Desert Storm**

The end of the Cold War heralded an optimistic decade in which the Western world took on responsibility for maintaining and bolstering the international liberal order, advocating democratic values, and protecting humanitarian interests. The Iraqi invasion of Kuwait was the first touch-stone for this policy and with the campaign

to liberate Kuwait in winter 1991, airpower started to define the new image of modern warfare and heralded a Revolution in Military Affairs (RMA) (Olsen 2010b; Shimko 2010). The nonstandard air centered joint campaign managed to produce a lopsided victory that only took 39 days of intensive air bombardment (including strategic strikes in downtown Baghdad) and a short – 4 days – ground war (Hallion 1992, 252). Apart from high training standards and an abundance of combat aircraft, Stealth aircraft, the proliferation of precision weapons, and information technology were key as was doctrinal innovation.

From day one F-117 Stealth aircraft – with a radar reflection surface of a golf ball – could operate almost unseen deep into Iraqi airspace, enabling strategic attacks against command centers and radar systems. Second, even a limited number of Precision Guided Munitions (PGMs) enabled a dramatic rise of intensity, lethality, and efficiency of air attacks. Whereas a typical non-stealth attack package required 38 aircraft to enable eight of those to deliver bombs on three targets, only 20 F-117s were required to simultaneously attack 37 targets successfully in the face of an intense air defense threat. This enabled achieving air superiority in just a number of days and implied a new dominance of the offense over the defense in air warfare. By rapidly crippling enemy air defense radars and SAM systems and effectively blinding the opponent, a virtual sanctuary in the third dimension was created that could be exploited for various purposes, such as Reconnaissance, Surveillance, interdiction, CAS, and Strategic Attacks. PGMs then offered the ability to accurately strike targets even from high altitude (Osinga and Roorda 2020, 167–168).

Technology also drove doctrinal innovation. In what amounts to a rediscovery of conventional strategic attack theory, John Warden, the architect of the strategic part of the air campaign, had recognized that precision weapons and accurate target information, stand-off and stealth capabilities offered new possibilities for strategic attacks against multiple target-categories of a nation state (military units, political and military leadership, and critical infrastructure). It was now possible to attack these near simultaneously and accurately, even if targets were in the vicinity of civilian objects. This would rapidly degrade the functioning of the entire “enemy system” (Warden 1995), and could cripple the strategic command capabilities before attacking fielded forces (Davis 1998).

PGMs also greatly improved the lethality of air-to-ground attacks for now one fighter could attack several targets in one mission, including dug-in tanks and artillery. The impact on the ground war was massive: Iraqi ground units were decimated from the air and roads and bridges leading into Kuwait were interdicted, isolating the Iraqi forces and destroying sometimes in excess of 50% of Iraqi armor and artillery equipment. The result was a drastically shortening of the time required and the risk involved for ground units to complete the coalition victory, suggesting also that modern military operations could avoid the traditional high numbers of civilian casualties and “collateral damage” to civilian infrastructure. The age of mass warfare – industrial age warfare – was over.

## Airpower and Peacekeeping Operations

The employment of precision airpower became, not surprisingly, the option of choice for Western politicians in the politically, ethically, and legally highly sensitive and constrained (and poorly understood) environments post-Cold War peacekeeping operations in the Balkan (Cohen 1994). Traditionally air assets in peacekeeping operations played a very limited role with tasks such as liaison, humanitarian aid transport, and medevac. Now, in the more contested and threatening environment of the ongoing civil war, with lightly armed peace keepers on the ground, NATO army commanders and politicians alike turned to air power for protection. A search for ways to deter or if necessary coerce political and military leaders of the various ethnic factions amounted to transporting idea from nuclear deterrence theory to this very different and conventional strategic context (Mueller 1998; Byman et al. 1999; Jakobsen 2020). In addition to familiar strategies such as *Punishment* (increasing the cost of achieving a strategic aim) and *Denial* (eliminating the means to carry out the strategy thus decreasing the chances of success), PGMs now also suggested (virtual) *Decapitation* and *Incapacitation* (paralyzing the country or its military apparatus by eliminating command nodes or disrupting command processes) as viable options.

Strategy in practice did not benefit from this exploration. NATO's air operation Deny Flight in the Balkan's highlighted the conditional nature of the advantage high technology may offer when not tied to a proper strategy and suitable context. Western forces operated under a limited UN mandate, and in a politically constrained environment, where pin-pick air strikes on targets with limited strategic value were unsurprisingly ineffective. Fearing peacekeeping forces would be taken hostage by the warring factions, NATO commanders, instead of escalating to achieve dominance, were required to de-escalate tense situations. Moreover, any targeting error, no matter the precautions taken, could result in civilian casualties that would produce dramatic media footage and, so it was feared, undermine the credibility and legitimacy of the NATO mission. Only when, in the tragic aftermath of the Srebrenica massacre in summer 1995, the NATO alliance created proper conditions for the effective use of force did coercive air operations achieve desired effects. The 18 day Operation Deliberate Force against Bosnian Serb forces (in fortuitous simultaneity with a Croat ground offensive) resulted in the Dayton Accords (Osinga and Roorda 2020, 171).

Strategy and political context were also unfavorable in the run-up to, and initial phase of Operation Allied Force over Kosovo, between March 24 and June 27, 1999, the limited air campaign to halt the continuing Serbian human-rights abuses that were being committed against the citizens of the Kosovo province. The low level of intensity of the first air strikes (only 48 sorties a day, versus 1300 daily during Desert Storm) and limited set of targets that could be attacked did not translate into coercive effect. The campaign initially involved only 50 targets aiming for five limited objectives: (1) minimizing loss of friendly aircraft; (2) impacting Serb military and security forces in Kosovo; (3) minimizing collateral damage; (4) achieving the first three in order to hold NATO together; and (5) protecting allied ground forces in neighboring Bosnia, especially, from Serb raids. Targets such as Serb forces, tanks,



and artillery in Kosovo (while uncontroversial politically and legally), however, represented little coercive value and, being small and fleeting, proved hard to detect and engage from high altitude. A wider set of targets only became politically acceptable when NATO credibility came to be at stake, resulting in strikes against railroad and highway bridges, ammunition storage facilities, petroleum reserves and oil refineries, command posts, military airfields, electrical and broadcast services, news media, and two of Milošević's homes. After 78 days, Milosevic gave in to NATO demands due to this continuous onslaught (38,000 combat sorties), combined with a shift in Russia's diplomacy away from Serb leadership, the increasing intensity of Albanian Liberation Army activities and the exhaustion of possible Serb countermoves without marked effects (Daalder and O'Hanlon 2000; Lambeth 2001). By flying at high altitudes and by launching weapons from stand-off ranges, allied casualties were avoided (McInnes 2002, 92). Interventions through PGM equipped air operations had now become the norm because public and political sensitivity for own losses, collateral damage, and civilian casualties had risen dramatically. Precision age air power had the advantage political pressure could be exerted without putting large numbers of army boots on the ground and without the risks for civilians traditionally associated with air strikes. Air power had become the icon of "humane warfare" (Coker 2002).

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## Commanding Air Operations

### The Challenges

Desert Storm and the Balkan air campaigns demonstrated commanding air operations is highly challenging. In short, air commanders must develop an air operations plan that accommodates the demands and constraints set at the political and military strategic level, cater to the support requirements submitted by army (and perhaps navy) operational level commanders, ensure air superiority, and synchronize air operations with the overall joint campaign plan. The Air C2 system must be able to analyze intelligence from a wide variety of sources, translate it into operations plans for the next days, detailing precisely for the entire force (sometimes involving several hundreds of aircraft) which squadron needs to prepare for a specified number of sorties against specified targets using a specified type of ordnance, while also communicating relevant frequencies of, for instance, AAR assets en-route or those of a Forward Air Controller. At the same time, planners need to accommodate for political sensitivities, and stringent Rules of Engagement all the while focusing on achieving political, military strategic, and operational level objectives.

These challenges are partly due to organizational lack of priority for command and control issues (McInnes 2018; Pratzner 2015). Compared to armies that have well-established and doctrinally institutionalized command structures – army corps HQ, divisional headquarters, etc. – in the West the command of air operations has only recently been codified in doctrines and standing organizations and even then only a few countries – the USA in particular, the UK, France, and Australia for

instance – have created effective operational Air C2 capabilities. During crisis management operations in the Balkan and as recently as Operation Unified Protector over Libya, NATO has struggled to create effective Air C2 structures and proved overly dependent on US Air C2 capabilities in terms of supporting ICT and expertise.

But challenges also result from several structural factors inherent to the nature of air power, and from different views among armed services concerning the proper roles of air power. First, complexity arises from the fact that air operations “work” at all levels of war. It is intensely dependent on massive flows of accurate and timely intelligence concerning not only the dynamic tactical situation on the battlefield, but also about developments deep in enemy theater, including the political dimension. Second, complexity arises from the need to orchestrate the operations of hundreds of air assets which are physically dislocated across hundreds if not thousands of miles. Third, air assets are scarce resources relative to the constant high demand. A variety of commanders of tactical ground units require intelligence, CAS and AI, while at the same time air commanders need to achieve objectives set at the operational level (for instance achieving air superiority) and strategic level (attacking regime targets). No other service knows a similar demand challenge. As a result, there is significant potential for fragmentation of the air effort. A request for tactical air support could compete with the allocation of the same air resource for operational or strategic objectives. Therefore “competing demands must be prioritized and apportioned accordingly, hence the requirement for centralized control, which ensures that aircraft are used as efficiently as possible to achieve military objectives. It prevents them from being inappropriately tasked by uncoordinated users against impractical objectives, or being divided into small packages of air power that would inhibit flexibility and hinder any requirement for a rapid concentration of force” (RAF 2017, 41).

This concern reflects harsh historical lessons and heated interservice debates going back to the early airpower theorists who advocated an independent role for air forces and centralized command of air power to ensure air superiority and strategic attack would get the priority it needed. Armies however feared they would be left without sufficient air cover and air support, thus advocating allocating dedicated air assets to ground commanders to use as their organic air assets, similar to their command over tanks and organic artillery units. During WWII initial US Army setbacks in North Africa were caused by penny-packing air assets, which was resolved when the RAF-British Army air-land C2 structure was adopted in which the air and land commander were fully “in synch” about operational plans and mutual capabilities, demands, and priorities. In the preparation of the Allied invasion in France, intense debate revolved around the requirement to start using strategic bombers for interdiction missions in France and the desire of some air commanders to continue with the ongoing strategic bombing campaign against the industrial heart of Germany. In the similar debates marred air operations in Vietnam (Osinga and Roorda 2015). During the Cold War NATO solved this problem in a hybrid manner: certain squadrons had dedicated air defense roles in the NATO’s Integrated Air Defence System while army groups responsible for holding the line in central

Europe each could call upon, and plan with, a dedicated numbered Allied Tactical Air Force. Scarcity was more or less circumvented by ensuring sufficient numbers of assets and splitting up air power into two separate command structures and processes.

## **The Tasking and Targeting Process**

Desert Storm saw the maturation of the air campaign planning and air tasking process. Avoiding a repetition of the Vietnam War era fragmented planning of air operations, for the first time, a single commander for air operations – a Joint Force Air Component Commander (JFACC) controlled all the theatre aircraft, including those of the Navy. His Combined Air Operations Centre mustered numerous tactical experts on specific roles, aircraft types and weapon systems, intelligence analysts, strategy advisors, and liaison officers from other services from. Based on political objective and an analysis of Iraq's centers of gravity, the JFACC staff developed the air part of the joint campaign plan. The air campaign consisted of a phase that focused not exclusively but predominantly on air superiority and strategic attack, which, once certain criteria had been met, would be followed by an intensive AI campaign to "prepare" the ground offensive, which in turn would be massively supported in a phase where CAS would be a dominant role. In the first phase the JFACC would be the "supported commander" while the Joint Land Component Commander was the "supported commander" for the later phases. To cater for the demands of ground commanders a Joint Targeting Coordination Board was established, which was responsible for reviewing the targets nominated by the ground commanders and apportioning aircraft in support of the battlefield preparation plan, to ensure all services saw their interests appropriately cared for in the air sortie apportionment (Osinga and Roorda 2015, pp. 42–50).

Based on these phases, the JFACC promulgated an Air Operations Directive which laid out his priorities, objectives, and special instructions for the next 72 h. The planning process followed a generic cycle of six steps: Commander's Objectives, Guidance and Intent; Target Development, Validation, Nomination and Prioritisation; Capabilities Analysis (including Weaponeering); Force Planning and Assignment; Mission Planning and Execution; and finally, Combat Assessment/Measurements of the Effectiveness of the Attack (Pratzner 2015, p. 80). His emphasis would be expressed in terms of allocation of air assets and apportionment of the air assets by roles (in terms of numbers or percentage of sorties). A Master Air Attack Plan (MAAP) would be developed involving selecting and prioritizing targets and matching the appropriate tactics and weapons for striking those. This targeting process resulted in detailing which targets would be attacked the next 24–72 h which would then form the basis for developing offensive strike packages, defensive operations and supporting sorties.

The resulting Air Tasking Order (ATO) and Airspace Control Order (ACO) would spell out for the next 24 h what sorties each squadron was to execute, when, against what targets, their position in a strike package, their role as escort

fighter, or the location of the Combat Air Patrol track, and all the necessary details concerning routes, AAR slots and related frequencies. With hundreds of sorties per day, the ATO's during Desert Storm could amount to 700 pages. During the Balkan air operations, the JFACC would add SPINS (special instructions) anytime he saw the need to communicate additional concerns, priorities, specific constraints and restraints such as the requirement to only drop ordnance if the target could visually be identified. Following sorties, Battle Damage Assessment would be conducted which would inform the ongoing MAAP and ATO development cycle, and informing decisions whether or not to shift to the next phase in the campaign plan, to increase the intensity of attacks, change the composition of strike packages and tactics, re-attack targets, adjust apportionment of assets for certain roles, relax constraints, or accept higher risk (NATO 2016b).

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## **Air Power Against Violent Non-state Actors**

### **The Problem of Small and Mobile Targets**

While the initial very short joint campaign of Operation Iraqi Freedom in 2003 was a resounding military success, exploiting air dominance and an impressive level air-land integration, leading to the fall of Saddam Hussain (Perry et al. 2015; Andres 2007a; Andres 2007b), it is the increased effectiveness of air power in irregular wars against violent non-state actors (demonstrated in operations against the Taliban, Hezbollah, Hamas and ISIS) that stands out, demonstrating that several persistent Air C2 problems had been solved.

Traditionally air power played primarily a supporting role in particular in mountainous or forested areas where finding and engaging small groups of fighters is extremely difficult. In 1991 the USA failed to suppress the launches of Iraq Scud missiles despite a massive air effort to locate them. It took up to 14 h between target detection and that information arriving at a pilot. In the Balkan the Serbs exploited caves and underground facilities, dispersed equipment and troops, used decoys, and skillfully moved outdated SA-3 systems every few hours forcing NATO planners to apportion 30% of every wave of attackers to the SEAD mission during Allied Force (Lambeth 2001; Mason 2010). NATO's Air Operations Centers lacked the capability for timely identification and tracking of such emerging targets. US Air Force's leadership recognized the need to speed up the level of responsiveness – the kill chain – and started to datalink the CAOC, other command and intelligence centers, surveillance and reconnaissance systems, and “shooters” such as F-16s or B-2 bombers. This greatly enhanced rapid dissemination of information throughout the units, enabling engaging so-called time-sensitive-target, and fostered air-land integration (Osinga and Roorda 2015, 56–57).

## Operation Enduring Freedom and ISAF

The political order to retaliate for the Al Qaeda attacks of 9/11 presented US military planners with an enemy trained in guerilla fighting in landlocked mountainous terrain, without significant infrastructure offering strategic coercive leverage. Pakistan denied it the option of a large ground invasion from its soil (Lambeth 2005; Lambeth 2010; O'Hanlon 2002). The default option was the employment of air strikes in close cooperation with only 300–500 Special Forces physically within Afghan territory, which liaised and empowered local opposition factions totaling no more than 15,000 men. The fall of the Taliban came after 78 days of on average 100 combat sorties a day, amounting to 38,000 sorties flown. The operation was however extremely complex for it involved a US/UK force of approximately 60,000 men supporting this operation, dispersed over 267 bases, on 30 locations in 15 countries. Relying predominantly on PGM's (60% of total bombs dropped), in essence it was an air campaign conducted in conjunction with, and supported by special operations forces, who acted as FACs, and friendly indigenous fighters.

These special forces benefited from the initiatives to shorten the kill chain. Equipped with laser range finders and data-links to connect them to command centers and strike aircraft, they enabled responsive air strikes against so-called emerging targets such as small Taliban troop contingents. Midway the operation, "flex-targeting" dominated: 80% of sorties took off without specific assigned target. Instead, airborne reconnaissance systems and special forces acted as eyes, spotting pop-up targets and relaying time-sensitive up-to-date accurate target information to shooter platforms inbound or already circling in the vicinity. Response times averaged only 20 min (and sometimes within minutes). This practice has given rise to the so-called SCAR role: Strike, Coordination And Reconnaissance, which is a hybrid of the air interdiction, CAS, and ISR missions, where combat aircraft detect and subsequently coordinate air attack or reconnaissance of targets.

When NATO launched ISAF from 2003 onward, its ground forces, spread out over a vast terrain, encountered a growing opposition from returning Taliban elements and other militant groups. In this environment intense air-land integration was both challenging (vast distances, many national caveats on the use of their units, few NATO Air C2 capabilities) and essential: without a continued effort involving thousands of sorties providing strategic and in theater air transport, logistical supply, air mobility, timely Medevac, rapid and precise offensive air support for troops in contact, air reconnaissance for convoy protection and detection and tracking of enemy movement, operations with lightly armed ground forces would be very risky, ineffective, and sometimes simply unfeasible. Enhanced precision air strike capabilities and better communication equipment for FACs created trust among ground troops in calling in CAS strikes well within the traditional thousand-meter safe distance from their own position while still avoiding fratricide. Due to these force protection tactics, compared to other COIN operations, ISAF, like OEF, was fairly successful in limiting casualties and engaging small groups of irregular fighters (Sinterniklaas 2019).

## Proxy Warfare

The so-called Afghan Model (Andres 2007b) – the combination of special forces, acting in tandem with local – proxy – fighters, and offensive air assets that proved successful during Enduring Freedom – has fruitfully also served as a de facto template for the concept of operations in operation Unified Protector over Libya in 2011. With a UN Security Resolution ruling out the employment of ground troops in Libya (and absent Western political appetite for such an adventure) NATO had to rely on a maritime blockade and air power to protect the Libyan civilian population against Gadhafi's troops. Air strikes managed to counter the immediate threat and a six-months air operation followed – exploiting air dominance, a range of reconnaissance assets, AAR refueling aircraft (indispensable considering the long flying distances and air patrol times), and new generation of small caliber precision weapons (averaging 36 bombs/day a total of 7642 bombs were dropped in 9700 strike sorties). But real progress stalled until special forces of several nations, covertly inserted, helped train and organize rebel forces and facilitated air-ground cooperation (Chivvis 2014; Engelbrekt et al. 2014; Mueller 2015).

Similarly, since 2014 the proxy warfare model has been successfully employed (under the guise of the “by-with-through” approach) by the US led coalition in Operation Inherent Resolve, the campaign against ISIS. Iraqi politics, Western political reluctance, and casualty sensitivity precluded returning to Iraq with massive ground formations. Instead, a limited number of US and coalition ground units trained Iraqi army troops and assisted them in fighting ISIS, all under the umbrella of, and in close cooperation with, coalition ISR and offensive air assets which in 2016–2017 delivered several thousands of bombs monthly on ISIS targets. This combination managed, slowly but steadily, to destroy ISIS forces, even in urban environments, liberate Iraqi villages and drastically diminished their hold on Iraqi territory (Votel and Keravuri 2018; Garrett et al. 2018; Work 2018).

These operations all demonstrated the progress the USA had made in effectively mastering time-sensitive-targeting. This novel dynamic targeting cycle, or F2T2EA – Find, Fix, Track, Target, Execute and Assess – emphasizes speed and focus on a target, track it wherever it goes, and then execute a military option as expeditiously as possible (Pratzner 2015; Fyfe 2005, 18–19). This process operates alongside, and within, the deliberate tasking cycles described above. As NATO doctrine states, “dynamic targeting normally prosecutes targets known to exist in the area of operations. They have received some target development but were not detected, located or selected for action in sufficient time to be included in the deliberate process. Dynamic targeting also applies to unexpected targets that meet criteria specific to operational objectives; on these occasions, resources are required to complete the target development, validation and prioritization. Prosecuting these targets may be possible by redirecting existing assets” (NATO 2016b, 1–1, 1–2). Institutionalization of this new process involved setting up new dedicated “cells” within the Combined Air Operations Center that were mandated to monitor incoming information and, if necessary, break into the ongoing ATO execution and re-direct airborne assets to engage those high-value targets.

## Targeting Terrorists

These F2T2EA capabilities have also been employed for counter-terrorist operations in Afghanistan, the Afghanistan-Pakistan border area and Iraq, along with, a novel capability: armed UAVs. Indeed, what stands out in recent Western air operations is the increasing employment of armed UAVs, or a combination of manned fighters and a targeting pod equipped UAV for so-called targeted killing actions against key leaders and small groups of Taliban, Al Qaeda, and ISIS insurgents and in politically delicate missions in Somalia and Yemen where substantial presence on the ground is inadvisable. Drones engaging in leadership-targeting missions are the final link in a long, intricate targeting chain involving numerous military and civilian intelligence agencies, foreign intelligence sources, legal advisors, and sometimes even senior political leadership.

Initially the effectiveness, legality, and ethics were hotly debated, leading to accusations of “dehumanization of war” and the “dronification of foreign policy” (Osinga 2013; Strawser 2013). Research has since revealed the legal and accountability framework guiding such operations and has indicated that strikes (by drones or fixed wing aircraft) against key members of insurgent and terrorist groups (bomb-making experts, ideological leaders, media-producers), but also “foot-soldiers” caught laying road-side bombs, operating mortar tubes or driving missile systems in pick-up trucks, have an attrition effect on such groups and affect their lethality and attractiveness for potential recruits (Pryce 2012; Johnston 2012).

This is also the Israeli experience. In the summer of 2006, when Hezbollah fired Katyusha rockets against Israeli communities and abducted two Israeli soldiers, air strikes were the default retaliation instrument, eliminating about 500 of Hezbollah’s most advanced fighters, destroyed about half of the unused longer-range rockets, and much of Lebanon’s infrastructure which was used to re-supply Hezbollah. Although the Second Lebanon War was marred by huge IDF deficiencies in joint warfare and Hezbollah claimed victory, strategically it was a success: it subdued Hezbollah for a considerable period.

The logic of crime prevention rather than the search for battlefield victory informs such operations: Israel aspires not for absolute deterrence but for restrictive deterrence, attempting to limit the risks and impact of terrorist attacks rather than absolutely preventing it. While violence may not be eliminated, it is limited to a level with which Israeli society can cope (Henriksen 2012; Inbar and Shamir 2014; Brun 2010). This logic also informed Israeli operations such as Cast Lead (2008), Pillar of Defence (2012), and Protective Edge (2014) where the IDF managed to inflict considerable punishment upon Hamas through an established network of multiple UAVs, fighter aircraft, and artillery in which the IAF managed to strike targets within minutes and after a launch had been detected, and follow on joint air-land operations in the dense urban environment of the Gaza strip (Cohen et al. 2017).

Targeted killing operations which aim for strategic effect and joint tactical operations which emphasize responsive support for ground units each require a specific Air C2 approach. Recent practice has given rise to three modalities. First,



sometimes centralized control and centralized execution is called for when the stakes are particularly high, where the highest-value assets are being employed or when there is a requirement to closely manage air activities that might have strategic effects, even though this may adversely affect tactical efficiency. However, centralized execution can also restrict tactical flexibility and is not responsive enough to local conditions. Second, sometimes centralized control and decentralized execution may be the proper approach when air activities take place simultaneously across single or multiple theatres of operation and no single entity may have the level of awareness required to manage all concurrent activities. Modern, networked communications have increasingly enabled execution authority to be decentralized, allowing on-scene commanders to make rapid decisions in complex, dynamic situations, including the delegation of weapons-release authority to aircrew, shortening the decision cycle and increasing speed of action. It can also be the only feasible option for complex air campaigns, where beyond line-of-sight communications may be degraded or denied. Decentralized control and execution, the third approach, may be allocated to subordinate commanders for specific periods of time to improve responsiveness. Nominated air units could integrate as specific task-focused and organized joint teams for certain operations (RAF 2017, 42). This demonstrates how the technology and organization of targeting, developed for conflict between States, has matured to enable effective engagement of even small groups and individuals with single PGMs from remote distances.

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## **Conclusion: Postmodern Air Power and the Western Way of War**

These experiences are indicative of the increased versatility of air power and thus its military and political utility. PGMs have altered the relationship between land and air power. First, the new ability to quickly achieve air superiority on a theater wide scale offers joint commanders a valuable asymmetric “sanctuary” to be exploited for various purposes, and provides new levels of protection for ground forces, lines of supply and logistics sites. Second, exploiting air superiority, airborne sensor platforms can provide unprecedented levels of situational awareness to the ground force commander and thus detect, and if necessary prevent, an adversary from massing armored forces, and delay, disrupt and destroy follow-on forces, thereby diminishing an enemy’s range of options. Third, rapid dissemination of accurate target information enhances precision of air strikes and reduces response times, enabling effective engagement of small and mobile targets such as insurgents, thus improving air support. Fourth, these capabilities enable an increased level of intensity of the air offensive, thus allowing a higher operational tempo for the entire campaign.

Finally, those new capabilities provide new options for coercive diplomacy, and even enable targeting individual terrorist leaders. Or, to paraphrase UK doctrine, airpower can be applied, at short notice, across the strategic, operational, and tactical levels of war simultaneously, significantly increasing the options available to national leadership. It can potentially negate the requirement to deploy a larger force over a broader timescale by land or sea and by minimizing or removing the



requirement for land forces, air power can make it easier to commit in politically ambiguous circumstances. Air power's agility also means the scale and scope of operations can be rapidly escalated or de-escalated in response to a change in political guidance or political strategic objectives (RAF 2017).

In a sense, the post-Cold War air power revolution has spawned a mode of warfare that suits and feeds Western societal changes in norms, expectations, and aspirations toward the use of force. Postmodern air power may indeed have become a cultural and normative expression of the Western Way of War (Shaw 2005; Thomas 2001; Coker 2002; Farrell 2005). Societal sensitivity also explains why targeting errors gain instant critical (social-)media attention and therefore political scrutiny, **even** when legitimate targets are struck and civilian casualties are the result of deliberate and unlawful negligence of the defenders that exploit Western sensitivities. "Risk-free" air strikes have also led to critical claims that Western politicians and ground commanders in close combat with insurgents tended to resort to force more liberally than previous eras when such aims could only be achieved by risky and costly deployments of ground troops. The trends toward further automatization of war in the form of widespread employment of armed UAVs reinforce this critique. Yet, this only underlines the conclusion that contemporary Western air warfare stands in stark contrast to the massive destruction air attacks wreaked in the total wars of the twentieth century. Expectations sometimes exceeded what lack of strategy, inadequate resources, the operational environment, opponent actions, or the constraints of politics allowed but the images of, and successes achieved with the employment of precision age air power – in concert with ground forces or independently in an expanding variety of operations highlights the new face and dramatically enhanced effectiveness of modern air operations.

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## Cross-References

- ▶ Counter Insurgency Operations
- ▶ Dynamics & Interaction of Military and Society
- ▶ Military Commandship
- ▶ Military Technology
- ▶ Network Centric Warfare
- ▶ Operations in Irregular Warfare
- ▶ Peace Support Operations
- ▶ Strategic Culture
- ▶ Strategy and Doctrine
- ▶ Weaponry

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# Military Operations in Cyberspace

Aaron Brantly and Max Smeets

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## Abstract

Over the years, experts – both in and outside of the military – have repeatedly stated that we need to improve our conceptual and doctrinal thinking when it comes to military cyber operations and how to address the cyber threat. The purpose of this chapter is to discuss the nature and role of military cyber operations. The chapter proceeds in six parts. Part one provides a glimpse at the evolving scholarly study of cyber operations. Part two conceptualizes military cyber operations in the present and explains the different forms of operations and operational processes. Part three examines the distinct features of cyber operations and how these features differ from or are similar to more conventional military operations. Part four, in turn, explains to what degree cyber operations can be used as a tool of coercion. Part five examines the potential for conflict

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A. Brantly

Department of Political Science, Virginia Tech, Blacksburg, VA, USA

e-mail: [abrantly@vt.edu](mailto:abrantly@vt.edu)

M. Smeets (✉)

Center for Security Studies, ETH Zurich, Zurich, Switzerland

e-mail: [max.smeets@sipo.gess.ethz.ch](mailto:max.smeets@sipo.gess.ethz.ch); [Mwsmeets@stanford.edu](mailto:Mwsmeets@stanford.edu)

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escalation in cyberspace and beyond. The chapter concludes with a brief discussion drawing together the disparate themes introduced.

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**Keywords**

Military cyber operations · Vulnerability · Cyber conflict · Cyber war · Deterrence · Threat

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**Introduction**

Over the years, experts – both in and outside of the military – have repeatedly stated that we need to improve our conceptual and doctrinal thinking when it comes to military cyber operations and how to address the cyber threat (For a similar statement see: Smeets 2018). “It’s 1946 in cyber,” according to James Mulvenon. “We have these potent new weapons, but we don’t have all the conceptual and doctrinal thinking, that supports those weapons or any kind of deterrence” (Singer and Friedman 2014). In 2010, when Gen. Keith Alexander went to lead the NSA and US Cyber Command, he uttered that there is “much uncharted territory in the world of cyber policy, law and doctrine” (United States Senate Armed Services Committee 2010). In 2014, when Michael Rogers followed up Keith Alexander to lead US Cyber Command, he made a similar statement: “We as a military and a nation are not well positioned to deal with [...] the changing threat in cyberspace” (United States Senate Armed Services Committee 2014). Four years later, in 2018, General Paul Nakasone, the new head of US Cyber Command and NSA continued the sentiment: “What we have to do is continue to determine what is the best way forward here, what fits within our national strategy, and then act on that” (United States Senate Armed Services Committee 2018).

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**From Cyber Pearl Harbor to Cyber Bombs and Beyond**

The study of cyber operations has been evolving in its modern scholarly form since at least 1993 when John Arquilla and Dave Ronfeldt first wrote a RAND report on the changing nature of conflict and the kinds of military structures and doctrines what would be needed in the future (Arquilla and Ronfeldt 1993). However, modern connotations aside, the history of operations occurring in and through the Internet and networked computers predates Arquilla and Ronfeldt and took up prominence within military and national security concerns beginning in the 1960s (Warner 2012). Many computer and early Internet security concerns took a back stage to other issues at the end of the Cold War, but it was the release of the 1983 science fiction film *WarGames* starring Matthew Broderick as a nerdy teen who in the process of hacking into computer game companies accidentally initiates a countdown to an actual nuclear launch that sets discussions and concerns of modern cybersecurity on their current trajectory. Modern cybersecurity concerns as a

significant threat arose when President Reagan upon watching the film at the White House queried his military and national security leadership as to the feasibility of the film and was unpleasantly surprised to learn that the reality was actually worse than science fiction (Kaplan 2016).

In the years that followed the release of *WarGames*, the US government began enacting laws and building structures to ensure the protection of government computers and systems connected through the evolving MILnet and NSFnets and later the Internet. As networks of interlinked computers increasingly pervaded the public and the private sectors of nearly all countries on earth, fears that vulnerabilities within these networks constituted existential threats increasingly rose to prominence both within academia and beyond. These fears culminated in a term coined by John Markoff, a New York Times reporter, who wrote of a “electronic Pearl Harbor” (Lawson and Middleton 2019). The term stuck and became enmeshed within general scholarly vernacular as the potential for a “Cyber Pearl Harbor.” Further credence was added to the term when in 2012 US Secretary of Defense Leon Panetta also spoke of a potential crippling “Cyber Pearl Harbor” (Ibid.).

The hyperbolic nature of the concept of a potential Cyber Pearl Harbor resulted in several works pushing back against the utility of the term and the reality of the impact of cyber conflict within military operations. Most significant among these works was an article by Thomas Rid, entitled “Cyber War Will Not Take Place” (Rid 2012). Despite the consistent utilization of hyperbole within a variety of scholarly and journalistic works on cyber operations (Kello 2017), an increasingly large volume of scholarship sought to parse out the mechanisms of conflict within cyberspace and in so doing isolate factors relating to the organization, utilization, and effect of cyber operations (Lin 2012; Kramer et al. 2009). The trajectory of scholarship on cyber operations has largely been divided into two principal camps diverging on perceived impacts. Generally, the field interprets impacts by following one of two courses of scholarship emphasizing nuance or hyperbole. Scholars focused on nuance privilege data-driven retrospective analyses, while those privileging hyperbole often focus on future oriented prognostications that extrapolate on potentialities. Below in our analysis of cyber operations, we focus on data-driven retrospective analysis that leverages existing cases and structures to identify and outline the contours of military cyber operations broadly.

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## Conceptualizing Military Cyber Operations

Military cyber operations can be defined as those cyber operations which a military entity of a nation-state plans and conducts to achieve strategic, operational, or tactical gain. (This means that the definition of military cyber operations is entity rather than effect dependent. Not all cyber effects operations are necessarily military operations – and vice versa.) A common distinction is made between three types of operations: (i) defensive cyber operations, those actions taken through the use of computer networks to protect, monitor, analyze, detect, and respond to unauthorized activity within a governments information systems and computer

**Table 1** Stages of a cyber operation

	Stage	Description
1	Reconnaissance	Research, identification, and selection of targets
2	Weaponization	Pairing remote access malware with exploit into a deliverable payload
3	Delivery	Transmission of weapon to target
4	Exploitation	Once delivered, the weapon's code is triggered, exploiting vulnerable applications or systems
5	Installation	The weapon installs a backdoor on a target's system allowing persistent access
6	Command & Control	Outside server communicates with the weapons providing "hands on keyboard access" inside the target's network
7	Actions on Objective	The attacker works to achieve the objective of the intrusion, which can include exfiltration or destruction of data, or intrusion of another target.

networks; (ii) cyber espionage operations, those actions taken through the use of computer networks to gather data from target or adversary information systems or network; and (iii) offensive cyber operations, those actions taken through the use of computer networks to disrupt, deny, degrade, or destroy information resident in computers and computer networks, or the computers and networks themselves, or in basic, operations designed to achieve tangible effects (These definitions are adopted based on the US Department of Defense classic distinction between Computer Network Attack, Computer Network Defense and Computer Network Exploitation and align with Joint Publication 3-12 on Cyberspace Operations).

In much the same way as conventional military operations have squad, platoon, and company, cyber teams are comprised a diverse set of individuals each bringing skills to bear in cyber operations. Teams are oriented towards one of the three types of military cyber operations listed above. And in many countries, members of teams will rotate between operation types over the course of their career to gain or improve upon necessary skills.

Cyber operations are comprised of several stages, largely dependent on type and objective of the operation. These stages are summarized in Table 1 and align with Lockheed Martin's Kill Chain Model. (There are several frameworks which lay out the stages of a cyberattack. This chapter draws on a common framework called the "Kill Chain" from Lockheed Martin. An alternative framework is MITRE's ATT&CK framework.) The first stage, or *reconnaissance* stage, involves activities to understand which targets will enable the operator to meet the objectives. This could include planning activities such as identifying employees of a company on social media networks or harvest email addresses. The second stage is the weaponization phase in which military cyber teams actively prepare for the operation. For example, teams work on selecting and compiling a backdoor and appropriate command and control infrastructure of the operation. Third, at the *delivery* stage the cyber team seeks to convey the malware to the target – it is the actual launch stage of an operation. Delivery of malware can occur through a malicious email, USB stick, or a man-in-the-middle attack among a variety of other potential attack vectors. Fourth, the *exploitation* phase is when the cyber team exploits



a vulnerability to gain access. This could be software, hardware, or human vulnerability. Fifth, the *installation* phase is when the team installs a backdoor or implants in the target environment to maintain access. Sixth, during the Command & Control (C2) phase, the team opens a command channel control the implants and remotely manipulate the target network or system. Seventh, at the final stage of actions and objectives, the attack achieves the ultimate mission's goal. An example of a goal could be the collection of user credentials, destruction of systems, or the modification of data.

These stages illustrate that there are close similarities between different forms of cyber operations. Indeed, as former NSA and CIA Director Michael Hayden writes about the connection between cyber espionage operations and cyber effects operations: "Reconnaissance should come first in the cyber domain too. How else would you know what to hit, how, when - without collateral damage? But here's the difference. In the cyber domain reconnaissance is usually a more difficult task than the follow-on operation. The difficulty resides in the technical reality that it is often tougher to penetrate a network and reside on it undetected while extracting large volumes of data from it than it is to, digitally speaking, kick in the front door and fry a circuit or two. [...] For example, an attack on a network to degrade it or destroy information in it is generally a lesser included case of the technology and operational art needed to spy on that same network" (Hayden 2016). Breaking into and subsequently on a system, subtly manipulating that system for espionage collection and eventually degrading, damaging all while avoiding automated and human detection requires substantial skill and actors with this level of capability are often referred to as advanced persistent threats.

In addition, it is important to recognize that the extensive planning of military cyber operations. Cyber operations are not conducted at the speed of light – operational planning takes time, dedication, and effort. As James McGhee states, "While we may have some number of cyber capabilities 'on the shelf', their operational use requires much more than simply loading them and sending them on their way. Our operators must first know and understand the target network, node, router, server, and switch before using any cyber capability against them" (McGhee 2016). Furthermore, as Ben Buchanan elaborates that "the speed of an operation varies by step; operational steps are linear but without strong momentum; persistence is powerful; and parts of operations can be prepared in advance" (Buchanan 2017).

Until very recently under Presidential Policy Directive 20 (PPD-20), a still classified document leaked by NSA contractor Edward Snowden, required military cyber teams in the United States to seek substantial review from various levels of government, including presidential authorization. PPD-20 has since been overwritten by the Trump administration in such a way as to ease the oversight constraints placed on teams (Council on Foreign Relations 2018). It is likely that many other nations based on their doctrines and their organizations structures have similar oversight or bureaucratic requirements that constrain the use of offensive cyber operations. These constraints add legal and policy barriers to the already arduous technical challenges ever-present within cyberspace.

## Dimensions of Military Cyber Operations

Much has been written on the distinct features of cyber operations – distinguishing operations in cyberspace from operations in the conventional domain (For an excellent overview see: Owens et al. 2009; S-1, Sects. 1.4 and 2.1). First, cyber operations are often undertaken with the assumption of high degrees of anonymity (Brantly 2016). The obscurity of the identity and location of actors is frequently referred to as the “attribution problem.” According to Herb Lin, attribution can have three meanings. First, attribution can be defined as ascertaining the machines associated with a cyberattack. Second, attribution can be defined as ascertaining the identity of the person or persons directly involved in conducting the cyber operation. Third, attribution can be defined as ascertaining the ultimate responsible part of a cyberattack. Attribution at this level is less about “who did it?” and more about “who’s to blame?” Responsibility is context dependent and not a binary phenomenon. Defenders often triangulate a variety of indicators to provide a probabilistic assessment of actor attribution (Brantly 2015). Healey has outlined a spectrum of state responsibility to more precisely assign responsibility for a cyberattack (Healey 2011). Table 2 lists the 10 categories on the spectrum, each marked by a different degree of state responsibility based on whether a state ignores, abets, or conducts a cyber operation.

Attribution is as much an art as a science. As Ben Buchanan and Thomas Rid note, “There is no one recipe for correct attribution, no one methodology or flow-chart or check-list. Finding the right clues requires a disciplined focus on a set of detailed questions — but also the intuition of technically experienced operators. It requires *coup d’œil*, to use a well-established military term of art. On an

**Table 2** The spectrum of national responsibility for cyber operations

1	<b>State-prohibited</b>	The national government will help stop the third-party attack
2	<b>State-prohibited-but-inadequate</b>	The national government is cooperative but unable to stop the third-party attack
3	<b>State-ignored</b>	The national government knows about the third-party attacks but is unwilling to take any official action
4	<b>State-encouraged</b>	Third parties control and conduct the attack, but the national government encourages them as a matter of policy
5	<b>State-shaped</b>	Third parties control and conduct the attack, but the state provides some support
6	<b>State-coordinated</b>	The national government coordinates third-party attackers such as by “suggesting” operational details
7	<b>State-ordered</b>	The national government directs third-party proxies to conduct the attack on its behalf
8	<b>State-rogue-conducted</b>	Out-of-control elements of cyber forces of the national government conduct the attack
9	<b>State-executed</b>	The national government conducts the attack using cyber forces under their direct control
10	<b>State-integrated</b>	The national government attacks using integrated third-party proxies and government cyber forces

**Table 3** Cyber operations collateral effects, mitigating actions, and representative controls

Undesired collateral effects	Mitigating actions	Representative controls
Unintended infection	Limit propagation to specific targets	1. Disallow self-replication 2. Infect systems only via spear phishing with malicious attachment or link to download or through previously infected systems
Unintended payload execution causing loss of: a. Confidentiality (data exposure) b. Availability (loss of data, denial of service, consumption of network resources) c. Integrity (data modification)	Prevent payload execution on nontarget systems	1. Use only active control measures to activate payload 2. Use detailed reconnaissance to determine triggers for passive or hybrid control 3. Trigger malware based on known target configuration
Vulnerability disclosure to unintended individuals or general public	Prevent reverse engineering and subvert forensic investigation	1. Encryption 2. Tamper protection 3. Temporary payloads that delete themselves from memory
Attribution of attack or source of the malware	Eliminate evidence of authors	1. Encryption 2. Tamper protection 3. Use widely used languages, libraries, and coding techniques 4. Temporary payloads

operational level, attribution is a nuanced process, not a simple problem. That process of attribution is not binary, but measured in uneven degrees, it is not black-and-white, yes-or-no, but appears in shades” (Rid and Buchanan 2015).

Second, military cyber operations are thought to have a higher risk of collateral damage. This does not mean, however, that military cyber operations are inherently indiscriminate. Cyber operations can be undertaken in a targeted manner – though it often makes the process more technically demanding and increased the amount of intelligence required about the target networks and/or systems. But, as Bellovin, Lin and Landau note, “When the technical demands can be met and the requisite intelligence is in hand, it is possible to conduct cyberattacks that are precisely targeted to achieve a desired effect and with minimal damage to entities that should remain unharmed.” (The scholars use the term “cyber weapon” instead of military cyber operation.) An excellent framework on the type of collateral effects and how they can be mitigated or repressed is developed by Raymond et al. (2013). The framework is shown in Table 3.

Briefly mentioned, but deserving of additional attention, is the notion of reverse engineering of malware used by military cyber operations teams. When bullets or missiles are fired, their ability to be reconstituted and returned to sender is limited. Yet, time and again the development and use of malware by militaries and intelligence agencies have resulted attacks that have leveraged the originating attackers own code. Examples abound, but one of the more prominent incidents in recent years

was the use of Eternalblue exploit developed by the NSA and subsequently implemented in the WannaCry attacks that crippled hospital systems globally including the NHS in the United Kingdom (Greenberg 2019). The reconstitution of malware by other state actors is a serious threat, that can and has impacted original attacking parties as well as third-parties not engaged in initial cyber operations. Knowing that code, unlike kinetic weapons, can be reused, should give pause both to the developers of exploits as well as those using them in military operations. Even a precisely targeted attack can and often does leave behind sufficient forensic data for the discovery of the attacking exploits attributes to be reverse engineered. This challenge places military cyber operations in a difficult position often referred to as the vulnerabilities and equities process in which they must weigh the costs and benefits of cyber operations beyond the first use of an exploit.

Third, cyber operations are transitory in nature: they are strongly time dependent in terms of their potential to cause harm to targeted systems (Smeets 2017; Smeets and Work 2020). The transitory nature of cyber operations is both a technical and a social product. Actors greatly differ in their ability to execute cyber operations. Certain actors have a wider variety of exploits and implants at their disposal, enabling more targeted attacks and thus reducing the chances of discovery. Also, the time-consuming process of developing and conducting operations leads to “constant trade-offs between the skills and resources required to develop a new computer code, and the odds of successfully penetrating targeted systems.” Offensive actors also have to make trade-offs with respect to the deployment of exploits and implants. Using a capability against a higher number of targets increases its chances of discovery. The type of targets matters too: not every actor has equal ability to detect and expose an attack. In some cases, it is much more likely the attack will go unnoticed (Ibid.).

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## Can Military Cyber Operations Coerce?

Numerous national strategies talk about the increasing role of offensive cyber operations; it is hardly surprising that coercion has received a great deal of attention. (Following Shelling, coercion in this context refers to both deterrence and compellence. Shelling 1966) Whereas there are few works on compellence, a large number of models have been proposed on how cyberattacks can be deterred by an adversary through the (threatened) use of a broad set of means (Borghard and Lonergan 2017). Most of the published articles argue that while it is more difficult to deter cyberattacks, there are ways policymakers can dissuade actors from attacking (Lindsay 2015; Libicki 2009). For example, Uri Tor proposes the notion of cumulative cyber deterrence: we should not seek to deter individual attacks but a series of attacks (Tor 2017). Joseph Nye Jr. notes that conventional cyber deterrence is difficult, but policymakers could instead focus on deterrence by economic entanglement and norms to overcome barriers (Nye 2016/2017). A more detailed overview of recent positions of scholars on cyber deterrence can be found in Table 4 (The scholars note that “Studies of ‘cyber deterrence’ raise as many problems as

**Table 4** Overview of scholars' arguments on the potential to deter cyberattacks

Denning	Same problems for CD as for conventional deterrence. Potential for CD through existing regimes
Brantly	Absolute deterrence may not be possible – but a form deterrence as in criminology might be. We need to move away from deterrence only by punishment and denial
Healey	CD is still working on the high-end – yet, nations show limited restraint. It is the aspect of “constant cyber activity” which causes problems
Nye	Conventional CD is difficult. Instead, we should focus on deterrence by economic entanglement and norms to overcome barriers
Sulmeyer	CD might be possible in theory. However, we are still unclear what activity to deter, and which tools to use to impose costs
Stevens and Muller	(NATO) CD seems to be viable. Yet, it should be viewed as a cumulative process, beyond military
Kello	CD does not work as a strategy, but we should aim for punctuated CD instead: we should not deter individual actions but a series of actions
Tor	We should move from “absolute” CD to “cumulative” CD, which is restrictive and continuous in nature
Lindsay and Gartzke	CD suffers from problems of rationality, attribution, and secrecy. This means we have to instead focus on deception as distinct strategy
Harknett	CD is impossible due to the structure of cyberspace. We there need to move away from the deterrence paradigm and consider different forms of strategy

would be raised by a comparable study of ‘land deterrence’.” Denning 2015; *ibid.*; Nye 2016/2017; *Ibid.*; Kello 2017; Tor 2017; Harknett and Nye 2017; Also see William 2017; Harknett and Fischerkeller 2017; Brantly 2018; Harknett and Smeets 2020).

Yet, this leaves open the question to what degree cyber operations can be used to deter a certain type of (military) means of an adversary (rather than whether some type of means can be used to deter a cyberattack). The transitory and clandestine nature of cyber operations makes it difficult to prove you have a specific type of capability predeployment. This means state actors can talk about specific military cyber capabilities whether or not they actually have them. Since possession is hard to verify, such talk can be described as “cheap talk” (Farrell and Rabin 1996; Thyne 2006; Farrell and Gibbons 1989).

Hence, state actors can talk about offensive cyber capabilities whether or not they actually have them; such talk is intended to convey to other actors the impression that the talking nation does have the talked-about capabilities (For a more detailed discussion see: Smeets and Lin 2018a). But since the fact of possession cannot be verified by other actors nor demonstrated by the talking state, such talk is cheap talk. Yet, cheap talk can still be meaningful in certain circumstances – especially if an actor has a certain reputation and credibility on the intention and ability to conduct an offensive cyber operation. As Smeets and Lin “[t]his has led to a number of paradoxical dynamics for cyber conflict.” “The release of the classified National Security Agency (NSA) documents by Edward Snowden has been described as the most embarrassing episode in the history of the secretive US intelligence agency.

It revealed how the NSA maintained a mass surveillance program over its own citizens, accessed data from companies, intercepted data from global communications networks and stored information of millions of people. Yet, it also exposed the impressive arsenal of the agency,” the scholars state (Ibid. Also see: Gompert and Libicki 2015; also see Libicki 2016, p. 198).

More specifically, Erica Borghard and Shawn Lonergran argue that three uses of military cyber power are most likely to be useful for aspiring coercers in cyberspace: (i) attrition, a strategy which aims to erode the adversary’s military capability such that the target can no longer resist, (ii) denial, a strategy which aims to increase the costs to an adversary such that achieving a military objective – such as taking a piece of territory – becomes prohibitive or impossible; (iii) and decapitation, a strategy which aims to achieve strategic paralysis by targeting command and control centers, leadership, critical economic nodes, and key weapons systems. The scholars argue that a strategy of punishment is more difficult for cyber operations, as the scale and scope required to inflict severe costs on enemy populations is hard to achieve. The scholars also argue that “risk strategies” – those strategies which gradually escalating the intensity and scope of attacks against civilian targets – are more difficult to pursue for military cyber operations. A tiered cyber campaign plan creating a ratcheting effect is difficult, as defense is said to become easier over time, and “effects can get beyond the control of the initiating state in unanticipated and potentially undesirable ways” (Borghard and Lonergran 2017).

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## Risks of Escalation

Concurrent to coercion is escalation. As states deter and coerce, they also seek to manage how quickly conditions change and often seek to maintain escalation dominance (Byman and Waxman 2001). As noted by Martin Libicki “in cyberspace, such calculations are particularly complex” (Libicki 2012), Libicki goes on to assess that many of the challenges associated with the management of escalation in cyberspace revolve around perceptions of gaining military advantage. Moreover, he states that while anonymity is maintained, the risk of escalation in nearly all activities constituting the preparation of the “cyberbattlefield” is limited. But escalation in cyberspace occurs within a digital fog of war between operators often engaging one another at great distances with stealth and subterfuge. Knowing where the line between status quo and escalation is can be nearly impossible until it has already been crossed. Moreover, as was discussed in the previous sections, many of the activities leading up to offensive actions in cyberspace that degrade, deny, destroy, or otherwise damage computers, information, or affiliated systems are undertaken clandestinely. Whereas in conventional conflict it is potentially possible with intelligence assets to ascertain the movement of armies and navies as they move into position, in cyberspace it is very likely the opposing force has already been in your system for quite some time.

The risks attendant with military cyber operations do, however, in many ways parallel the risks associated with conventional effects based military operations.

Comparable damage and destruction to critical infrastructure can be wrought with kinetic and cyber weapons. Through the manipulation of nuclear power plants, it is also conceivable that cyber operations might even result in radiological effects (Futter 2018). Yet for all their escalatory potential, the data on escalation in cyberspace to date is less than clear. Sarah Kreps and Jacquelyn Schneider, following detailed analysis and in line with historical analysis on firebreaks differentiating conventional and nuclear weapons, likewise find a firebreak of sorts between cyber and conventional and nuclear (Sarah Kreps and Schneider 2019). Their study finds that members of the general public and decision-makers identify in cyber operations something that is categorically different from conventional and nuclear operations and are consequently unwilling to retaliate let alone escalate (Ibid.). This firebreak highlights a cognitive disconnect between actions taken in cyberspace and those taken outside of it. While the same outcomes might occur, these outcomes are processed or interpreted in different ways. Kreps and Schneider write: “Our study suggests that cyberattacks create a threshold that restrains the escalation of conflict. Americans are less likely to support retaliation with force when the scenario involves a cyberattack even when they perceive the magnitude of attacks across domains to be comparable. Our findings provide support for cyber strategies based on assumptions of cyber thresholds, while also casting doubt on the credibility of cyber deterrence by punishment. More broadly, our research suggests effects-based theories of escalation may not help understand the impact of emerging technologies on strategic stability” (Ibid.). These findings both limit the escalatory potential of cyberattacks and constrain their utility, a finding reiterated below by Borghard and Loneragan.

Analysis by Brandon Valeriano, Benjamin Jensen, and Ryan Maness highlights a distinct lack of escalation within cyberspace related to offensive cyber operations (Valeriano et al. 2018). Valeriano et al. contend that cyber operations serve as a release valve that prevents escalatory behaviors in other domains. Their detailed data on hundreds of cyber incidences over the past two decades indicates no clear escalatory patterns. Moreover Valeriano et al. note: “The ambiguity of cyberspace shields decision makers from hawks, who will demand higher rates of escalation, and doves, who will demand appeasement” (Ibid.). In all of their cases, they documented only two instances of escalation, both related to Stuxnet. Their data paired with that of Kreps and Schneider indicate that cyberspace is a potentially highly permissive environment in which actions can occur with little consequence.

Borghard and Loneragan writing on the exaggerated nature of escalation in cyberspace: “. . . if cyberspace is in fact an environment that (perhaps even more so than others) generates severe escalation risks, why has cyber escalation not yet occurred? Most interactions between cyber rivals have been characterized by limited volleys that have not escalated beyond nuisance levels and have been largely contained below the use-of-force threshold” (Borghard and Loneragan 2019). Borghard and Loneragan continue in writing by outlining three principal reasons why escalation is rare in cyberspace: First, retaliatory offensive cyber operations may not exist at the desired time of employment. Second, even under conditions where they may exist, their effects are uncertain and often relatively limited. Third, several attributes of offensive cyber operations generate important trade-offs for



decision-makers that may make them hesitant to employ capabilities in some circumstances. Finally, the alternative of cross-domain escalation – responding to a cyber incident with noncyber, kinetic instruments – is unlikely to be chosen except under rare circumstances, given the limited cost-generation potential offensive cyber operations” (Ibid.). Combined the evidence of escalatory potential in cyberspace seems to indicate that cyber operations while rhetorically portrayed as a wild west of state to state interactions exhibit patterns of behavior that are less bellicose and more measured. If states and their militaries are more measured, should we be concerned with escalation?

While the evidence to date indicates limited evidence of escalation in response to cyber operations, two authors in particular highlight that the potential for escalation should not be ignored. Libicki, writing prior to the release of the 2018 DoD Cyber Strategy revision, highlighted a number of ways in which conflict in cyberspace whether due to attributional issues or ineffective information on signaling intent might lead states to escalate in response to cyberattacks (Libicki 2012). Libicki further notes understanding and managing an escalation ladder requires understanding how a potential adversary will respond. Such an understanding is largely absent in cyberspace, in part because of a lack of clarity on capabilities of the adversary as well as a lack of understanding of one’s own vulnerabilities to within domain escalation. Whereas conventional intelligence is highly useful in assessing and understanding the kinetic capability of adversaries, the comparable assessment of cyber capabilities is only discovered through leaks or unintentional disclosures.

The challenges and risks associated with managing escalatory behaviors in cyberspace are further reiterated by Jason Healey who finds that the very strategy of persistent engagement makes some fundamental assumptions about adversary behavior which might be wrong (Healey 2019; also see Smeets and Lin 2018b). Such an underestimation is potentially risky in dyadic interactions. Yet the risks increase markedly when other actors, emulating the US strategic posture, also engage in persistent engagement. The potential risks associated with multiple actors all engaging in concurrent cyber operations increase the potential for miscalculation.

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## **Discussion: The Evolving Nature of Military Cyber Operations**

Military operations in cyberspace, while not entirely new, having been initiated in the 1990s, are only now coming into their own. As quotes by General Nakasone and others illustrate, states, in particular the United States, are increasingly viewing cyberspace as a valid domain of military action and are structuring their military forces, developing legal and policy frameworks, actively engaging in operations. This chapter has highlighted the contours of a field of inquiry and a practice that is changing rapidly. New questions, new capabilities, and ominously more and more targets are coming online in cyberspace. The result is that operations to defend, surveil, and engage in offensive activities in cyberspace are in many ways still in



their nascent stages. In the span of 30 years, more than 3 billion people have come online. Nearly every country in the world has some form of critical infrastructure that relies on the Internet. Developed countries are increasingly wholly dependent on cyberspace for everything from the management of national security command and control, to the functioning of streetlights and the cars on roads.

An increasing number of countries are actively seeking to fund and train military cyber operators. Prominent actors with cyber programs today include the United States, Russia, Iran, China, North Korea, Israel, Netherlands, Estonia, the United Kingdom, and many more. Just as states learned to effectively wield other technologies from machine guns and tanks, to strategic aircraft and ballistic missiles, states are actively engaging one another and learning how to wield the potential of cyberspace to their advantage. Whether learning where deterrence works, or doesn't, or when states will or will not escalate in response to cyberattacks, the future of military cyber operations is evolving. As challenges such as attribution are increasingly addressed, and as new technologies such as artificial intelligence, machine learning, quantum cryptography, and other technologies improve, militaries will have to adapt to remain relevant and effective. The one constant of cyberspace is that it is growing ever more important to the economic, political, and social well-being of states and their citizens, the result is that military cyber operations to safeguard states, and their citizens will continue to grow in importance in the coming decades.

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## Summary

This chapter discusses the nature and role of military operations in cyberspace. The chapter proceeds in six parts. Part one provides a glimpse at the evolving scholarly study of cyber operations. Part two conceptualizes military cyber operations in the present and explains the different forms of operations and operational processes. Part three examines the distinct features of cyber operations and how these features differ from or are similar to more conventional military operations. Part four, in turn, explains to what degree cyber operations can be used as a tool of coercion. Part five examines the potential for conflict escalation in cyberspace and beyond. The chapter concludes with a brief discussion drawing together the disparate themes introduced.

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# Evolution of Joint Warfare

Edward R. Lucas and Thomas A. Crosbie

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## Abstract

The ability to employ force across the physical warfighting domains of air, land, maritime, and space is essential in contemporary conflict. In NATO doctrine, the term “joint operations” refers to military actions “in which elements of at least two services participate.” While doctrinal definitions differ slightly across Western militaries, the basic premise remains that “jointness” in military operations entails significant action in at least two of the physical warfighting domains. This chapter provides an overview of joint warfare, beginning with a brief discussion of its development over the past century. It then turns its attention to the development of joint doctrine and the joint functions. It concludes with a brief discussion of what some military theorists see as the next iteration of joint warfighting: multi-domain operations (MDO).

## Keywords

Joint operations · Military doctrine · Joint warfare

E. R. Lucas (✉) · T. A. Crosbie  
Centre for Joint Operations/Institute for Military Operations, Royal Danish Defence College,  
Copenhagen, Denmark

## Introduction

The ability to employ force across the physical warfighting domains of air, land, maritime, and space is essential in contemporary conflict. In NATO doctrine, the term “joint operations” refers to military actions “in which elements of at least two services participate” (NATO 2017). While doctrinal definitions differ slightly across Allied militaries, the basic premise remains that “jointness” in military operations entails significant action in at least two of the physical warfighting domains. This chapter provides an overview of joint warfare, beginning with a brief discussion of its development over the past century. It then turns its attention to the development of joint doctrine and the joint functions. It concludes with a brief discussion of what some military theorists see as the next iteration of joint warfighting: multi-domain operations (MDO).

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## Evolution of Joint Operations

War is fundamentally a land-based activity. Seizing and holding territory remains central to all major military campaigns, just as it has throughout history. Technological advances, however, now allow us to wage war at sea, in the air, and from space. (While currently no country has a stated ability to project kinetic actions from space, space assets [e.g., GPS, satellite communications] are essential to conducting military operations.) The ability to do two or more of these concurrently is essential in contemporary warfare. Amphibious landings are the earliest organized violence that might be considered joint operations. The ability to move ground forces by sea dates to when we first learned to build watercraft capable of carrying people. While a Paleolithic raiding party traveling by dug-out canoe or a medieval Viking longship force can perhaps be considered a proto-joint force, the relevance to the contemporary military planner or analyst is obscure. Instead, we begin our overview of the development of jointness in the First World War.

The 1915 Gallipoli Campaign provides a more manageable starting point for an examination of joint operations in modern warfare (Naughton 2019). It also exemplifies the challenges that arise when military services carry out operations in tandem. As part of an effort to drive the Ottoman Empire from the war and to open lines of communication with Russia, French and British forces (including many soldiers from the British Empire) undertook an amphibious landing to seize the Gallipoli peninsula in southwestern Turkey. The technology and tactics, such as the lack of dedicated landing craft and the generals’ reliance on frontal attacks against entrenched positions, proved woefully inadequate for the task. Entente efforts were also hampered by poor coordination and communication between ground and naval forces. For example, the British army relied partially on naval intelligence for planning its ground campaign. Since navies are more concerned with the location of sea mines than machine gun positions, this intelligence was deficient for the land campaign (Naughton 2019; Rudenno 2008). These problems, together with stiff

resistance from Turkish forces, resulted in an unmitigated Entente defeat, at the cost of 300,000 casualties.

Of course, many First World War battlefield disasters cannot be blamed on the limitations of jointness at the time. The opening day of the Battle of the Somme, where nearly 20,000 British soldiers were killed, provides a stark example of single domain military disaster. Although aircraft played a role on the battlefield in 1916, their relatively minor contribution means that operations, such as the Somme Offensive, were land rather than joint operations. These strategic and tactical failures forced strategists to recognize that modern warfare required coordination of different assets, both within and across services. In the armies, the doctrinal concept of combined arms (e.g., infantry, tanks, and artillery working in unison) was recognized as critical to overcoming the ascendancy of defensive technology. Although an army concept, combined arms doctrine was essential for the development of joint force doctrine. Across services, failures like the Gallipoli campaign demonstrated the need to improve cooperation and coordination between armies and navies. As the war dragged on, the battlefield expanded to encompass greater aspects of the air domain, as aircraft played an increasingly important role, not only for intelligence, surveillance, and reconnaissance but also as a kinetic force. The perceived importance of airpower only increased after the war, as theorists such as Giulio Douhet and Billy Mitchell, touted the revolutionary shift that aircraft – and especially bombers – entailed. While these interwar airpower proponents overstated the strategic effects of air campaigns, the tactical importance of airpower was fully evidenced during the Second World War.

The Second World War was the first major war to fully exploit the three warfighting domains available at the time. Germany's military success in Western Europe in 1940 was due, in large part, to the effective coordination of ground, air, and at times, sea assets. Japan's expansion across the western Pacific islands – and the American island hopping campaign that came in response – relied on large amphibious forces comprised of significant air, ground, and maritime assets working in close coordination. The 1942 Allied landings in North Africa, known as Operation Torch, illustrate both the advances in joint operational warfare since Gallipoli and the significant impediments that remained. These landings demonstrated the power of military operations that used all available physical domains to project power ashore. At the same time, the operation was plagued by command-and-control (C2) and coordination issues between the armies and the navies of the United States and the United Kingdom. Operation Torch is also an example of the challenges of "combined operations," which in current military doctrine refers to operations with forces from two or more nations. Command rested with General Dwight D. Eisenhower, who in his official report (declassified in 1965) stressed the enormous bureaucratic and cultural barriers to jointness that became immediately clear. What is surprising today is that the struggle to overcome the boundaries between the two nations was no less than the struggle to overcome the boundaries between each nation's services. In Eisenhower's words:

Alliances in the past have often done no more than to name a common foe, and 'unity of command' has been a pious aspiration thinly disguising the national

jealousies, ambitions and recriminations of high ranking officers, unwilling to subordinate themselves or their forces to a commander of different nationality or different service (Eisenhower 1965, p. 1).

Torch required high levels of coordination between the United States and United Kingdom and between all services as many different elements had to come together in the right sequence in order to land the forces in Morocco and Algeria: “anything less than complete integration of effort would spell certain disaster.” Eisenhower realized jointness at this critical juncture through a rather mundane innovation: he created a two-star position designated Chief Administrative Officer (which he described as “a post unique in the history of war”) solely responsible for resolving interservice and Alliance disagreements (1965, pp. 1–2).

As Torch demonstrates, despite the acknowledgment of the importance of operating in all three domains, warfare remained tied to individual services. Only the most exceptional campaigns forced commanders to break traditional service divisions, and to do so required imaginative ad hoc bureaucratic innovations, which were then immediately dissolved.

While the advent and proliferation of nuclear weapons revolutionized warfare at the strategic level, service parochialism remained a fact of life throughout the early days of the Cold War. At the tactical level, conventional war proceeded much as it had before the nuclear age. “Jointness” remained elusive, as services fought wars in their own domains as part of what were often loosely coordinated campaigns. The American experience in Vietnam provides a clear example of this military strategy stove piping, especially evident in the rivalry between the US Air Force and US Army over the air domain (Horwood 2006).

The 1986 Goldwater-Nichols Act in the United States serves as a critical bureaucratic development in the history of the joint force in Western militaries. As part of a significant reorganization of the American armed forces, Goldwater-Nichols removed the military service branches from “operational control” of fighting forces. Instead, operational control was now held by Combatant Commanders who had designated areas of responsibility. For example, American forces deployed to the Middle East now fall under the operational control of the Commander of United States Central Command (USCENTCOM), regardless of their military service. There are exceptions to this: For example, the US forces who conducted the raid against Osama Bin Laden’s compound in Abbottabad, Pakistan, were under the Operational Command of US Special Operations Command (USSOCOM), not USCENTCOM. Although only applying to the American Department of Defense (DoD), by codifying the centrality of the Joint Force, Goldwater-Nichols fundamentally altered how the United States and its allies operate in international deployments. Wars were no longer fought – at least ostensibly – by armies, navies, and air forces.

The restructured US military’s first major test came during the 1991 Gulf War, where a large American and allied force obliterated the Iraqi army in Kuwait in a matter of days. On the surface, the Gulf War seemed to herald the long-awaited ascendancy of joint warfighting. This view was promoted by the DoD, stating that the war had “demonstrated virtually every principle of war and element of joint



doctrine in action” (Joint Publication 3-0 1995, p. x). Some analysts, however, have challenged this assertion, arguing that American military dominance in the conflict allowed US and allied forces to operate inefficiently and “to cater to the doctrinal preferences of the various services” (Winnefeld and Johnson 1994). This debate may surprise those who take the premise of American joint doctrine at face value. While the DoD has evolved a series of doctrinal publications intended to define a singular vision for how American force should be projected jointly at the operational level of war, a closer look at this doctrine reveals the persistent challenges in achieving the sort of unity across national and service boundaries that Eisenhower struggled against almost 80 years ago during Operation Torch.

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## The Evolution of Joint Doctrine

American and NATO joint doctrine originated in combined arms doctrines, which evolved to define the use of complementary land-based weapon systems (Crosbie 2019). The spirit of combining military instruments of power continues to inform policy development at virtually every level and is shared by most if not all of America’s allied militaries. By contrast, the failure to operate jointly is routinely disparaged as evidence of service parochialism or even corruption. While critics can be found, the weight of historical evidence and of informed opinion is clearly on the side of jointness. As military policy has evolved, this consensus has gradually moved to take center-stage, even as the reality of perfect jointness proves elusive.

As we have seen above, during times of conflict, instruments of power are combined and integrated through the Joint Force Commander and his or her staff. Officially, a Joint Force “is” joint when it includes elements from more than one service. However, it only actually “does” jointness when it actively combines instruments of power in some productive way. The term “joint functions” has emerged in doctrine as a shorthand way of expressing those dimensions of conflict where combining instruments of power is particularly useful. They are in this sense a sort of checklist to ensure that the latent potential of jointness is in fact being realized.

In American doctrine, there are today seven joint functions: Intelligence, Movement and Maneuver, Fires, Information, Protection, Sustainment, and Command and Control. For the NATO alliance, there are eight, since NATO doctrine also includes Civil-Military Cooperation (CIMIC). Despite their importance doctrinally and organizationally, the joint functions are little known and rarely discussed in the national security community and are often poorly understood by officers entering Joint Staffs. This is not entirely surprising. The joint functions are a paradox of stability and change. On the one hand, they are the pillars of operational doctrine, establishing a coherent framework for what a Joint Staff can and should do at the operational level of war. On the other hand, the list has undergone significant revision over the years, reflecting deep disagreements on what concepts merit inclusion – and even what each concept means. And while the term itself is fairly new, having only entered common usage with its inclusion in the US Joint Publication 3-0, *Joint Operations*

in 2006 (and adopted into NATO doctrine in 2011), it reflects ideas that have appeared off and on in US Army doctrine for well over a hundred years.

The challenge facing doctrine writers is how to realize the latent benefits of jointness given real-world limitations in time, attention, and resources. That is where the joint functions come in. By focusing on a delimited set of prioritized areas where joint effects can be achieved, a Joint Staff can give structure to the enormous complexity of contemporary military operations.

While the Joint Staff is designed to organize its work around the joint functions, the joint functions should not be confused with the Joint Staff directorates (J1-J8), which they superficially resemble. The relationship is clearly accounted for in doctrine. The purpose behind the staff directorates is to ensure that a Joint Staff has the right mix of expertise across key areas. The doctrine makes clear that an actual staff needs to break up the silos that can be created by the directorates, and instead, the experts should mix together in a number of subgroups (listed in the doctrine as “centers, groups, bureaus, cells, offices, elements, WGs and planning teams”) (Joint Publication 3–33 2007, p. xiii). Once reassigned to their subgroup, staffers need to achieve certain types of effects. Thus, while staffs are commonly divided into eight directorates and they are expected to achieve effects through seven or eight functions, the two things are ultimately quite different.

The joint functions, then, were never intended to be another level of organization. Rather, they are a heuristic model for understanding descriptively the way power can be directed to achieve ends on the battlefield. But why these particular functions, and what does it mean for the integrity of the list that is has changed and remains contested? To answer these questions, it is necessary to briefly look back over the history of the doctrine. The starting point is 1905, and the publication of the United States Army’s first combined arms manual, Field Manual (FM) 100–5, *Field Service Regulations* (Ancker 2013). Surprisingly, the first extended discussion of what combining arms actually entails would not arrive until the fourth edition (1914), where the combined arms are described as the effective balancing of the infantry, artillery, cavalry, special troops (mostly engineers), and heavy field artillery (U.S. Army Field Manual 100–5: Field Service Regulations 1914, pp. 74–76).

In these early days, manual writers focused on what made up the combined arms. The 1923 edition adds the signal corps and air service and renames “special troops” as “engineers.” It also states clearly the value of combining arms: “No one arm wins battles. The combined employment of all arms is equal to success” (U.S. Army Field Manual 100–5: Field Service Regulations 1923, p. 11). Five more editions followed (in 1939, 1941, 1944, 1949, and 1954), with each adding elements to the list. By 1954, the list had grown to include ten components: infantry, armor, artillery, the corps of engineers, the signal corps, the chemical corps, the Army medical corps, the quartermaster corps, the transportation corps, and the military police corps. So unwieldy was this list that the 1962 edition cut back to the original 1923 list: infantry, engineers, artillery, and armor. Notably, information and intelligence elements are entirely absent throughout, since these were viewed as separate from the combined arms.

What we can conclude is that Army doctrine writers have long been committed to the idea that the combining of land power elements enables gains on the battlefield. This belief has tended toward a kitchen-sink effect, with more and more elements highlighted as standing to benefit from combination, until order is restored by a return to first principles. Prodigality balances against parsimony.

A quirk of the doctrine up to this point is that the writers never quite got around to explaining how a commander should manage all of this complexity. The doctrine exhorted combined effects and described the elements that needed to be combined, but failed to specify how the elements should be balanced together. In hindsight, then, the *Field Service Regulations* from 1905 through to 1954 had fairly modest aims, ensuring only that future leaders, when called upon to lead a campaign, would at least know what arrows are in their quiver.

The major intellectual breakthrough came with the doctrine revisions of the 1960s when the doctrine writers finally began to nail down the specific ways combining arms can lead to better outcomes. In the 1968 revision of FM 100–5, the writers switched from presenting a laundry list of functional elements that can be combined to identifying the types of needs that these elements can address. The doctrine now described the need for “multicapable forces” that combine their elements to achieve better outcomes in five fields: Intelligence, Mobility, Firepower, Combat Service Support, and C3 (command, control, and computers) (U.S. Army Field Manual 100–5, Operations of the Army Forces in the Field 1968).

For a time, this insight was forgotten. When General William E. DePuy drafted the famous “Active Defense” edition of FM 100–5 (1976), he dispensed with much of the verbiage and most of the concepts of earlier manuals, preferring a livelier style with vivid examples drawn from recent experience (U.S. Army Field Manual 100–5: Field Service Regulations 1976). Dissatisfaction with DePuy’s manual (described by Romjue) led General Donn A. Starry to oversee the publication of the equally renowned AirLand Battle edition (U.S. Army Field Manual 100–5: Field Service Regulations 1982). Here, DePuy’s ideas about active defense were blended with Starry’s ideas about AirLand Battle and with the 1968 manual’s ideas of multicapable forces. In the 1982, 1986, and 1993 editions, this intuition was refined through discussion of the so-called elements of combat power, now listed as *maneuver*, *firepower*, *protection*, and *leadership* (which replaced C3). This tighter focus (dropping intelligence and combat service support from the discussion) perfectly reflects what has been described as the Army’s cultural shift toward preparing for high-tempo, conventional force engagements (Melillo 2006).

Despite the prominent place given to these “elements of combat power” in the Army manuals of 1982, 1986, and 1993, the first Joint Publication on the topic (JP 3–0, *Doctrine for Joint Operations*, 1993) makes no mention of these principles. Nor do they appear in the 1995 or 2001 editions. Nevertheless, Army doctrine writers were still very much committed to these concepts, and in the 2001 edition of Army operational doctrine (re-designated from FM 100–5 to FM 3–0), a new element of combat power was added to the list: *Information*. This was not to last. Interestingly, the next edition, released in 2008, drops Information and brings back Intelligence, which had been missing since the 1968 edition, and defines these

elements of combat power as “Warfighting Functions.” This remains, as of 2018, the current state of Army thought, which builds its description of the Army’s capabilities around six Warfighting Functions: Mission Command (the new name for Command and Control), Movement and Maneuver, Intelligence, Fires, Sustainment, and Protection.

Looking at the Joint and Alliance levels, the idiosyncrasies of Army thought come into focus. In 2002, NATO published its first joint operations doctrine, Allied Joint Publication 3–0, *Allied Joint Operations*. The imprint of US Army doctrine is plain to see in this document, with the elements of combat power now renamed “Joint Capabilities,” which included the most persistent elements of the Army manuals (C2, Maneuver, Fires, Intelligence, and Sustainment, renamed Logistics), dropped Protection, and added a number of unfamiliar items: Planning, Targeting, and CIMIC. Also included were two Information functions: Information Operations and Public Information. Where Army doctrine downgraded the role of information in this period, NATO emphasized it.

Meanwhile, American Joint Doctrine was revised in 2006 to finally incorporate the Army’s elements of combat power, now named for the first time as “joint functions.” Where NATO doctrine split Information between Information Operations and Public Information, US Joint Doctrine included it in the vague category “Other Activities and Capabilities,” a seventh joint function encompassing psychological operations and deception. The 2011 and 2017 versions of JP 3–0 dispensed with Information entirely, but finally brought it back as a fully fledged joint function with much fanfare in 2018 (Grynkeiwich 2018).

NATO and US Joint Doctrine were finally coordinated with the revision of NATO Allied Joint Publication 3, *Allied Joint Doctrine for the Conduct of Operations*, in 2011. NATO’s Joint Capabilities became joint functions. Public Information was folded into Information Operations and the outlier concepts Planning and Targeting were dropped entirely. In 2019, the doctrine underwent one last revision, with Information Operations renamed simply Information to align it with the 2017–2018 American doctrine. The current state of NATO doctrine thus defines eight joint functions: Command and Control, Maneuver, Intelligence, Fires, Sustainment, Information, Protection, and CIMIC. The current state of US Joint Doctrine is identical, except it excludes CIMIC.

At the very center of military innovation since Operation Torch has been the elusive promise of realizing tactical, operational, and strategic gains through combining arms and crossing domains. Combining, integrating, making joint: these are the explicit goals of the Joint Force, the US Department of Defense, and the unified combatant commands, and are now routinely celebrated by the separate services as well. The joint functions are the doctrinal culmination of taking jointness seriously, and the shifts we have traced in what constitutes the joint functions can be taken as a broader history of joint thought at the operational level of war.

## Joint Operations in Non-Western Militaries

Scholarly research on military operations has tended to view the drive for increased jointness through the lens of the Western (and particularly the American) military experience. While major non-Western military powers also wrestle with many of the same issues as their Western counterparts, their experiences have been largely ignored in academia. Access to open source information on certain militaries, such as Chinese and Russia, presents a considerable challenge for researchers, important bodies of academic literature on joint operations beyond the United States and NATO.

In 2015, the Chinese military undertook significant reforms that have led to comparisons with the Goldwater-Nichols Act. A relatively new convert to jointness, China's military reorganization has generated some interest in professional military and scholarly journals (Blasko 2016, 2019; Saunders 2016). China's efforts to develop a capable joint force is a change from its traditional focus on land operations. Although Russian and Soviet military theorists are credited with many significant doctrinal innovations at the operational level of war over the past century, such as "deep battle" and "operational art," the contemporary Russian military's ability to conduct joint operations has been called into question. The 2008 War with Georgia demonstrated significant flaws in Russia's C2 systems. In an effort to avoid mistakes of the past, Russia has focused on developing its capabilities in joint warfare. Much of the interest in the West has focused on Russian use of information operations and hybrid warfare, some research has been conducted on conventional Russian joint military operations (Beehner 2018). Recent scholarship has also examined joint operations in India, Italy, and Israel, respectively (Ben-Shalom and Tsur 2018; Moro et al. 2018; Mukherjee 2017).

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## Conclusion: Beyond Jointness?

Jointness has been a central focus for militaries for much of the past one hundred years. Although problems persist, Western countries armed forces' abilities to conduct operations involving two or more services have improved dramatically since the Gallipoli landings or Operation Torch. More recently, non-Western militaries, such as China, India, and Russia, have also undertaken reforms to improve jointness, moving away from land force dominated doctrines. While scholarship on joint operations remains highly specialized and is largely found within professional military journals, such as *Joint Force Quarterly*, venues, like the *Journal of Strategic Studies*, have begun to publish research on the subject.

Jointness is inextricably linked to technological advances, such as the advent of sailing ships or powered flight. Most recently, technology has allowed access to a fourth physical domain: space and created whole cloth a fifth warfighting domain (at least doctrinally) – cyberspace. With these advances, some senior military officers and theorists have begun to question whether it is time to move beyond the concept of joint operations and adopt multi-domain operations (MDO) as a

guiding principle. Rather than jointness, which is predicated on the assumption that military services operate in their own organic domains (e.g., navy = maritime, army = land), but coordinate closely with the other services, MDO envisions a much more fluid battlefield. While services will retain their domain specializations, every service will produce effects across all domains. MDO, however, is in the early stages of development, and it is too soon to tell if it will become a fully fledged military concept that replaces jointness.

Regardless of what concept (if any) eventually displaces jointness from its central role in US and NATO doctrine, the need to operate across air, land, maritime, and space will remain essential to contemporary conflict.

**NB:** Parts of this chapter are revised from Crosbie (2019), with permission from *Joint Force Quarterly*.

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# Military History: An Introduction

Niels Bo Poulsen

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## Abstract

This chapter offers an introduction to military history. It outlines the relation between history in general and the subdiscipline of military history. Traditionally military history has been “war-centric” and during the late nineteenth and early twentieth century a significant split occurred between military professionals who studied the past in order to find military lessons and establish principles of war and civilian academics who increasingly came to see military history as methodologically primitive and war-glorifying. Contemporary military history, however, has to some extent bridged this gap, and today military history is “a broad church” characterized by a rich variety of approaches. Nevertheless, a number of profound challenges face historians wanting to do military history, including commercialization of the field, a strong tendency to Euro-Atlantic centrism, lack of representation, and a paucity of theoretical and methodological debates. Currently the

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N. B. Poulsen (✉)

Institute of Strategy and War Studies, Royal Danish Defence College, Copenhagen, Denmark

e-mail: [nipo@fak.dk](mailto:nipo@fak.dk)



most notable principal approaches to military history are operational military history, war and society (new military history), deconstructivist military history, and memory culture oriented military history.

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**Keywords**

History · Historiography · Armed Forces · Military Education · Principles of War · Methodology · Epistemology

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## **Introduction**

This chapter offers an introduction to military history – one among many sub-disciplines within the discipline of history. Military history is among the oldest forms of history and has served a broad range of purposes. Traditionally military history has been “war-centric,” and during much of the twentieth century, military historians suffered from the reputation of being war-glorifying and of carrying out methodologically unsophisticated work. Historically speaking a major producer (and consumer) of military history have been military professionals who studied war and warfare in order to derive useful lessons from it. Contemporary military history, however, is a much more diverse undertaking, characterized by a relatively broad definition of what comes under the heading of military history. Thus there are many different approaches to studying the subject. Over the last decades some of the new developments have been an increasing mainstreaming of gender perspectives and replacing a Eurocentric approach with a more global history oriented approach. Despite such new and innovative ways of doing military history, the field may still be regarded as one of the most conservative within history. It is also one of the few fields of history which continuously relates to a large milieu of professionals – that is, officers and military specialists who seek inspiration and guidance from military history when preparing for war. Thus military history may be characterized as one of the oldest and most widely used among the military sciences. In addition, military history is a remarkably commercially oriented subdiscipline as a large market for books, films, and other types of media related to historical narratives of war exist. Currently some of the principal approaches to military history are operational military history, war and society/new military history, deconstructivist military history, and memory culture oriented military history.

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## **Defining Military History**

Military history is just one among many fields in the discipline of history. Although a concise delimitation to other fields of history is difficult, military history may according to Michael Howard simply be defined as “the history of armed forces and the conduct of war” (Howard, 1988, p. 4). While this definition encapsulates what many still view as the defining content of military history, other scholars have

advocated for a broader and more inclusive definition (e.g., Messerschmidt et al., 1982, p. 48). According to Stephen Morillo, apart from wars and warfare, military history includes the history of military institutions, “the varying roles of soldiers and warriors in different societies and the social impact of warfare” as well as such topics as war’s interaction with economics, technology, culture, and social structures, including gender roles (Morillo, 2006, p. 3f). As Matthew Hughes and William Philpott notes “there is very little in modern human history which has not been determined or touched by war” (Hughes & Philpott, 2006, p. 1) – an observation which makes it tempting to define military history as broadly and inclusively as possible. Yet, if military history is to function as a distinct area within the historical science, a certain topical core is useful. War (including the preparation for war and the termination of war), warfare, and armed forces may be said to represent the phenomenon, the social practices, and the institutions which are at the center of military history.

In the Anglo-Saxon scholarly community, “military history” is the preferred term, although there exist a number of partly overlapping and competing terms such as “war and society” (Speller, 2012). The term military history has equivalents in many other European languages (French: *Histoire militaire*; Spanish: *Historia militar*; and German: *Militärgeschichte*). Traditionally, however, the German term has been *Kriegsgeschichte*, similarly to today’s Russian term *voennaya istoria* (both terms literally meaning “war history”). This is not merely a semantic subtlety, but reflects the narrower scope of military history before the twentieth century; war and warfare was the focal point rather than military affairs in a broad sense.

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## The Study of the Past as Military History

Military history and its parent discipline, history, share an interest in studying and explaining the course of the past, including contextualizing and interpreting the causes of historical change. History has been – and still is – characterized by a variety of approaches on how to study the past, including different positions on whether historical explanations amount to anything other than narrative constructions of an irretrievable past (Munslow, 2006). Some historians still believe that it is possible to establish by means of historical study a relatively high degree of correspondence between the historian’s narrated account of the past and what most likely happened in the past (Evans, 1997). Others are much more skeptical, and some would argue that the very notion of a well-defined past is doubtful thus preferring speaking of the past in plural.

Not only do historians struggle with the question how (and if) the past can be reconstructed and narrated in a theoretically and methodologically sound way. They have also increasingly become interested in how the past is used by contemporary society and in the processes of how collective memory function (Kansteiner, 2002). This interest reflects that gaining scholarly insight is just one of several ways of addressing the past. Human collectives also use the past in numerous other ways, most prominently to create and maintain identities, to entertain themselves, to derive

useful lessons, and to seek guidance for future action. Military history has served all these functions. In much traditional military history, past victories and defeats were used to create unifying narratives about one's own nation while vilifying other nations. Inside the armed forces, a certain type of history writing, often termed "regimental history," was (and is) used to create a strong corporate identity by stressing the heroic and successful exploits of the military unit in question rather than studying it in a reflective, critical, and dispassionate manner (Millett, 1992, p. 4).

The increased focus among historians on how the past is used has contributed to a considerably broadening of the field, thereby giving birth to memory studies, one of the areas where history links up with other disciplines such as sociology, psychology, and anthropology (Kansteiner, 2002). Yet, it is no novelty that history is closely related to other disciplines and professions and military history is a case in point. Traditionally, military history has occupied a central position in the military sciences. As recorded experience from past battles and wars, military history has been used to formulate principles of warfare, to develop doctrine and to teach future officers their profession. Sun Tsu, Vegetius, Machiavelli, Saxe, Bülow, Clausewitz, and Jomini (to mention but a few military thinkers) have all, in various ways, drawn extensively on military history when formulating their observations on war and warfare (Lider, 1983; Angstrom & Widen, 2015, pp. 79–81). Even among those not believing in the possibility of establishing fixed principles of war on the basis of past military experiences, such as the chief of the Prussian General Staff, Helmuth von Moltke the Elder, military history was seen as a valuable tool of education for officers because it offered a pool of experience and thereby served to demonstrate the intricacies and complexities of warfare (Holborn, 1986, p. 289). Military history is thus a field which engages a large milieu of professionals – that is, officers and military specialists; by seeking inspiration and guidance from past military events this milieu contributes significantly to the considerable demand that exist for military history. How exactly to derive lessons from the past and how to translate such insights into improving the performance of officers is, however, a disputed subject (Beaumont, 1994; Evans, 2020; Kerttunen, 2011).

In terms of epistemological approach and theoretical debates, history has often been influenced by other disciplines, primarily within the social sciences – for example, by Marxism and by the Linguistic Turn. This has led to considerable theoretical convergence between history and other disciplines. Nevertheless, there is also a strong methodologically oriented strand among historians, which tends to disregard such theoretical debates and rather focus on reconstructing the past by applying ad hoc multilayered and multi-causal models of explanation (Gaddis, 2002). These historians generally focus on identifying and utilizing huge bodies of sources and often they are more interested in the methodological problems of finding, evaluating, and exploring the sources than in the larger epistemological and theoretical implications of their craft. This may result in written texts which are narratively strong, easily read and to the general reader appears to be "to-the-point," but which also offer a relatively low level of abstraction and reflection. Together with the fact that history pertains to all fields of human activity and thus is highly relatable

to the interested layman, this may explain why well-written history often entertains a large non-scholarly readership. Thus, serious research and popularized writing are often easier to combine than in many other scientific disciplines. This, however, comes with a price – rigid (and to the reader boring) methodological and theoretical deliberations are often absent.

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## **Military History Becomes a Subdiscipline**

Traditionally, history has been dominated by tales of kings, state-like entities, and wars. In that sense, military history represents one of the classic areas addressed by historians. The often-mentioned paradigmatic example of that is Thucydides' history of the Peloponnesian War (written around 431 BC). In this work, the causes and the course of the war between the Greek city states of Sparta and Athens are investigated in a detached and critical manner, relying upon written and oral sources. In addition, the events studied by Thucydides are being subjected to a clear analytical scheme – the driving forces behind the war famously described as “fear, honor and interest” (Thucydides, 1998). In fact, military history may be seen “as the oldest form of history writing in many cultures” due to the fact that rulers actively sought the recording of their military exploits from the time when writing was invented (Morillo, 2006, p. 2). Statehood and military power were thus legitimized by being narrated and written down. Not only were war and warfare integrated in most major works devoted to the history of nations from early modernity and onwards: important developments such as the emergence of state-based standing armies and rapid technological change contributed to the creation of a distinct subdiscipline of military history. The establishment of standing armies and state institutions created bureaucracies, and this in turn resulted in the creation of military archives and in specialized entities in the armed forces that were tasked with studying military history and derive lessons from it, or teaching it to military students. The first instance was the establishment of the Austrian military archive in 1801. This archive contained a section for military history with the goal of providing the army with relevant historical material (Nowosadtko, 2002, p. 58). Fifteen years later, the Prussian General Staff established a war history section and by the second half of the nineteenth century, most European armed forces not only possessed archives but also had established military history sections, which published substantial and detailed studies of their own and foreign armies' wars (Echevarria II, 1997). Simultaneously, history in general and especially military history became a central part of the curriculum at institutions of military education, such as the Prussian *Kriegsakademie*. Yet, the same processes also resulted in military and civilian institutions studying military history gradually moving apart and taking two main directions, which were highly different in terms of their perception of the past and whether history could offer lessons. Inside the armed forces, for example in military academies and research sections under the general staffs, the focus was dominantly on deriving useful lessons from war and on justifying and glorifying one's own armed forces. This approach resulted in “a

romantic-heroic history that centered on an intuited understanding and vicarious experience of the past” and paid little attention to contextualization of the matter to be studied (Echevarria II, 1997, p. 573f). In civilian academia, however, it was the dominant position that past events were unique and should be studied and understood in their historical context rather than being sifted for militarily useful lessons which could transcend time and place. These conflicting views materialized during the late nineteenth century – the paradigmatic example being the debate between German historian Hans Delbrück and representatives of the German General Staff in the so-called *Strategiestreit* (i.e., *strategy controversy*). As opposed to the German armed forces’ perception of strategic thought as transcending time and culture, Delbrück maintained that wars could only be studied in their historical context and that they offered no enduring lessons. On their side, representatives of the history section of the German General Staff argued that civilian historians were neither qualified nor entitled to study how militaries fought at war (Lange, 1995).

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## Decreasing Civil Academic Interest

As indicated, during the nineteenth century also the civilian academic world related strongly to military history. Not only historians as Hans Delbrück but also social scientists and other thinkers like Friedrich Engels took a major interest in war’s role in history. Some, such as Edward Creasy, even saw war as a main agent of historical change – a perspective, which was reflected in his famous 1851 book *Fifteen Decisive Battles of the World* (Morillo, 2006, p. 35). By the turn of the century, however, military history began to look like a dead end to most university-based historians. Writing a few decades after Creasy’s book, J.R. Green in his *History of the English People* declared that “it is the reproach of historians that they have too often turned history into a mere record of the butchery of men by their fellow-men.” He added: “But war plays a small part in the real history of European nations and, in that of England, its part is smaller than in any” (Quoted from Oman, 1939, p. 160). Especially after the First World War, military history increasingly came to be seen as war-glorifying and unworthy of scholarly study at civilian universities (Creveld, 1983, p. 552). Rather than as a cause of historical change, war came to be viewed as a symptom merely reflecting deep rooted economic and social structural forces in society at large. This led to a general isolation of military history from other types of history through most of the twentieth century. Admittedly, the marginalization of military history was a process characterized by considerable national variations in terms of when, why, and how much this type of history lost terrain. In Germany, it was the cumulative effect of two disastrous wars, the immense Nazi atrocities during the Second World War, and a wholly new approach to military history in the new democratic *Bundeswehr* as well as in academia that triggered the change, and the decisive marginalization of military history did not start until the end of the Second World War (Kollmer, 2013). In neighboring Denmark, the process had started already at the end of the nineteenth century and is normally associated with Denmark’s defeat in the 1864 war against Austria and Prussia in combination with

the alleged dominance in academia of historians with a pacifist outlook (Jespersen, 2008, p. 8f). Also in other countries such as France and the United States, university-based military history experienced an eclipse during much of the twentieth century. However, no studies have demonstrated exactly how and why the process unfolded, and there are conflicting views on how severe the marginalization was. In addition, we know little about the degree to which the same tendency manifested itself in non-western or illiberal societies during the twentieth century.

Nevertheless, during the said period, military history occupied two significant niches: As described above, it was studied and taught at military institutions of higher learning or within specialized research units, such as the US Army Historical Division. This institution produced a sequence of high-quality official histories of the US army, including the monumental “green book” series on the Second World War. In a similar vein, the German Bundeswehr operated an in-house institute for military history: *Militärgeschichtliche Forschungsamt* (today *Zentrum für Militärgeschichte und Sozialwissenschaft*). This body consistently turned out solid works on German military history and had a pioneering role in studying the armed forces of the Third Reich. In the case of Germany, the *Forschungsamt* enjoyed full academic freedom – a liberty not necessarily shared by military history research institutes within the armed forces in other countries. Thus, while much valuable work has been done by historians in the service of their armed forces, their efforts have typically been circumscribed by a combination of self-censorship, document classification, and political considerations (Freedman, 2017).

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## Military History Commercialized

Military history also occupied another niche: that of a highly lucrative and deeply popular genre of history. Probably more than any other area of history, military history has become commercialized. It offers a mass market and “draws writers not just from academics and professional military personnel, but also from professional authors and popularizers who happen to choose military topics for their marketability” (Morillo, 2006, p. 5). Especially Anglo-Saxon historians have proved capable of turning out well-written (and often, but not always, well-researched) books, in the process selling millions of copies in dozens of languages. Along with the popularity of such books goes an equally big market for other products such as magazines and electronic media – including for a certain period – a TV channel “Military History.” This, in combination with a steady stream of Hollywood movies dedicated to wars and battles involving US forces (chapter “Popular Culture and the Military”), undoubtedly have created a considerable bias toward American military history – at least in (west-) European-US collective memory. Nevertheless, it should be noted that in addition to a globalized Anglo-Saxon dominated market for military history, there are also national markets and audiences, especially oriented toward their own nations’ wars and campaigns. A vivid example of that is the significant role played in contemporary Russia by books and other media products about this country’s wars (Carleton, 2017). The defining characteristics of much of the market-oriented

military history are a strong emphasis on the dramatic and spectacular, often epitomized in terms like “decisive battle” and often written in the tradition of Creasy – that is, with a credo of western liberal triumphalism. Other important features are a considerable focus on the technological-material aspects of warfare, including “super-weapons,” and on “great captains” such as Alexander the Great, Napoleon, and the outstanding Second World War generals (Biddle & Citino, 2018; Black, 2004, p. 38). Finally, there exist a strong fascination with the military history of the Third Reich and with the war on the eastern front 1941–1945. In both cases, the result is often very narrow and highly tilted accounts, which for example draws uncritically on the memoirs of German generals (Smelser & Davies, 2008). This dimension of military history: its commercialization and its function as part of what have aptly been termed “war as a spectator sport” remains an understudied aspect of the subject. For more empirical examples on how this has played out in popular culture, Ender, Reed, and Absalon provide an insightful read into the subject of precisely *Popular Culture and the Military* in another chapter to this Handbook of Military Sciences (chapter “Popular Culture and the Military”).

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## New Military History

Traditional military history was to a large extent “battle-centric,” and this focus has remained strong both in the work being done inside the armed forces and among historians writing with an eye on the market. However, during the second half of the twentieth century, a new and more inclusive form of military history emerged – the so-called new military history (chapter “‘New’ Military History”). A new generation of historians, such as John Keegan, initiated a novel form of war studies, where insights from sociology, psychology, and social history played a significant role. Rather than treating war as an abstraction in which the fighting men were mere pawns on a chess board, and in which the vantage point was that of the generals and statesmen, the new military history was very much written “from below” and took great interest in the experiences of the common soldier. In addition, “new military historians” typically studied aspects of the life of military institutions other than merely going to war and fighting battle. Emotions, gender roles, everyday lives of soldiers and civilians in wartime as well as the social and mental impact of war were among the new topics to be studied (Bourke, 2006). The research agenda suggested by “new military history” have since then become mainstream. In fact, Biddle and Citino have recently argued that “‘new military history’ is simply what military history is today: broad-based, inclusive, and written from a wide range of perspectives” (Biddle & Citino, 2018).

While “new military history” undoubtedly reinvigorated military history from within, larger societal developments have also contributed to its renaissance. Scholars have noted that the period since the end of the cold war have been characterized by an increasing interest in military affairs in general (Kühne & Ziemann, 2000). Today, armed forces and warfare are studied and taught at civilian universities on a worldwide scale. Apart from holding chairs in departments of



history, military historians are an integral part of cross-disciplinary environments such as war studies, strategic studies, conflict studies, and security studies (Spiller, 2006). How this intellectual volte-face came about is an understudied subject and deserves additional attention. The explanation may partly be found in the emergence of a new security landscape (Echternkamp, 2013): Beginning with the Yugoslav civil war, and accelerating after 9/11 2001, western forces were deployed in new roles – doing peace enforcement and counterinsurgency – and in novel types of conflicts, so-called new wars (Kaldor, 1999). These new assignments created challenges of a new type and historians and other scholars increasingly began to address military affairs and contemporary security challenges by studying past analogies (Hughes & Philpott, 2006, p. 5f). From about 2004 the defense establishment in many NATO countries began to study past counter-insurgency operations in order to learn how to counter the insurgencies in Iraq and Afghanistan. David M. Edelstein, for example, published a study of 24 military occupations since 1815 with the objective of explaining why some succeeded while others failed (Edelstein, 2004). New military challenges are, however, unlikely to explain fully the surge in academic studies of military affairs, including military history. It may also be linked to a general militarization and securitization of western societies, as exemplified by Rosa Brooks' study of how the US armed forces increasingly have been tasked with assignments traditionally being the responsibility of other state agencies (Brooks, 2017).

As of today, military history may be characterized as “a broad church” (Hughes & Philpott, 2006, p. 4). It is a field of study within which one may encounter a diverse range of theoretical and methodological approaches and highly different expectations about the scholarly output and its application in real-life situations. It is also a field characterized by a certain sense of being the underdog among historians – especially among those insisting on a battle-oriented perspective (Lynn, 1997). It is also notable that the field is still characterized by a limited reflection on the theoretical aspects of history writing and by an absence of large debates among its practitioners about how to do military history. This especially pertains to many of the more traditional forms of military history. Browsing the journals of the field, one rarely encounters contributions to the basic questions of how to study history or, for that matter, import of theoretical models from other disciplines. This is a significant contrast to many other types of history. Characteristically, the number of works in English tackling the basics of military history – its epistemological, ontological, and theoretical foundations and the methodological problems associated with it – are limited (see further reading at the end of the chapter).

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## Future Challenges for Military History

Among the challenges still facing military historians is that of making the field of practitioners more diverse and of achieving a pluralistic approach. In 1997 John Lynn stressed the importance of incorporating gender and cultural history into military history (Lynn, 1997, p. 789). Since then many valuable works have been



produced in these fields; nevertheless “the white male” dominates the field – both as the acting subject in the works produced and in terms of who practices military history. Another noteworthy bias relates to military history being weak on studies from a global perspective. Related to that has been a tendency to focus on cutting-edge conventional military forces and failing to grasp the diversity and complexity of why armies are raised and deployed across the specter of societies (Black, 2018, p. 2).

The increasing interest in overcoming a US/Eurocentric approach to military history have resulted in the establishment of specialized periodicals for Chinese and African military history (in 2012 viz. 2017) in addition to a journal devoted to Slavic military studies (with a strong emphasis on history) in existence since the end of the cold war. The dearth of military history focused on non-western societies and institutions is especially remarkable given that war is a universal human social practice, and yet a phenomenon, which is strongly culturally conditioned and escapes simplified explanations based on technology, geography, or civilization (Lynn, 2003). Some of the explanations for the lack of a truly globalized military history may be structural. As explained in the introduction to the first edition of a journal devoted to African military history, this area of study has been neglected due to general prejudices about “the worth” of studying the history of that continent but also due to “limited access to sources, underdeveloped supporting institutions, and even the politics of the topic” (Thomas & Doron, 2017, p. 5). Not only does regional studies of military history outside the United States and Europe have an intrinsic value in themselves, they also represent important correctives to prevalent conceptions and syntheses founded on western source materials exclusively. Recently, for example, a special issue of *Journal of World History* (no 1, 2014) was devoted to the question of a distinct western military revolution taking place during early modernity and making European armies superior to armies elsewhere. Based on East Asian drilling manuals, Tonio, Kang, and Cooper have demonstrated that an almost parallel development took place in the far east (Tonio et al., 2014), thus illustrating that the process of European conquest and colonization cannot be reduced to a matter of military superiority.

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## **Military History: Some Typologies**

How can military history in its present form be outlined? One possible way of organizing the field is along functional lines. In 1984, Raymond Callahan suggested that military history contained three dimensions or, as he termed it, “faces”: a popular one, an academic one and an official one. He depicted their purposes as being entertainment and instruction, critical academic study, and institutional memory of the armed forces, respectively (Callahan, 1984; Morillo, 2006, p. 5). Callahan’s model may serve as a useful outline of the purposes of studying military history, but it does not necessarily offer insight into the methodology associated with doing it, or the theoretical basis on which studies of military history is written.

Other typologies are possible, like linking military history to more general types of history, as suggested by Rolf-Dieter Müller. According to this author, military history can be divided as follows: Military history is a subfield of political history inasmuch as war represents the continuation of politics by other means. However, when studying military institutions rather than war, much insight can be gained from social history and sociology (chapter “Military Sociology”). Then there are the technical and economic aspects of war. Here economic and technological history plays a role in military history – for example by providing context around the development of weapons, or because wars often have immense economic implications (chapters “Strategy and Economics” and “Behavioral Economics in Military Research and Policy”). Müller also mentions that fresh perspectives on military history can be gained from regional and local history as well as art and culture history. Yet, he also stresses that military history is more than just the sum of these (and other) possible subdisciplines, and he advocates staying focused on military institutions and their operations as the core subject. This is a task which demands special skills from the historian in order to understand how military practitioners think and act (Müller, 2009, p. 19ff).

According to Robert Citino, academic military history can be divided into three different scholarly approaches. The traditional focus on “the hows and whys of actual warfare, strategy and battle” he terms “operational history” (campaign history). Secondly, there is the “war and society” approach, studying “the nexus between armies and societies.” As a third “school,” Citino mentions an approach to military affairs originating in “the history of memory and culture” (Citino, 2007).

Applying Citino’s three schools of military history as a useful starting point, this author is of the opinion that one may distinguish between four different approaches to military history, based on their disposition related to primary institutional bias, primary subject, theoretical/epistemological bias and purpose, which in one way or another permeates most of today’s scholarship. These four forms of military history are depicted in Table 1.

Operational military history may be seen as the updated form of classical battlefield and campaign history, that is, military history focusing on how wars are fought, and why one side prevails over the other. In its crudest form, it can be a rather mechanistic and simplistic undertaking – characterized by the study of force ratios combined with the effect of leadership, morale, terrain, weather, etc. and primarily geared toward explaining why a given battle or campaign was lost or won. In contrast, new military history – in reality a broad and diverse category – is less interested in fighting as a military-technical issue and focuses much more on how war is waged from a human perspective, and how military affairs affect members of the armed forces and society as a whole. Military history inspired by the linguistic turn offers a different perspective, that is, how war is represented in narratives. Indeed, the proponents of this approach would argue that this is the only way we can study war (as well as any other historical phenomenon), because the past is transmitted to us by means of narratives. Finally, memory-oriented military history looks at how collectives make sense of past wars by selective and highly plastic processes of memorization and amnesia (chapter “Military History and Collective Identity”).

**Table 1** Principal forms of contemporary military history

Type of military history	Primary institutional basis	Primary subject	Theoretical/epistemological basis	Purpose
Operational history	Military research institutions/ institutions of higher learning within the armed forces	Warfare and battle from the perspective of wanting to understand the causes of victory and defeat. The preparation for war	Positivist and empiricist – war creates identifiable patterns of causation	Lesson learning Identity building Commercial gain
New military history/war and society	Civilian universities	The military as an institution embedded in time and culture The soldiers' perspective The interaction between war and society	Historicism and hermeneutics War is a cultural and social phenomenon	Understanding war's role in a given epoch's society and culture
Military history inspired by the linguistic turn/post-structuralist military history	Civilian universities	Narratives about war	The experience of war as a linguistic construction Textual analysis Post-structuralism	Understanding war as a discursive and socially designed phenomenon
Memory-oriented military history	Civilian universities	The role of war and warfare in collective memory	Social constructivism	Understanding the role of war in identity-building processes

The forms of military history outlined in Table 1 may easily be challenged. They do not nearly represent the variety of real and possible approaches to military history. Rather, they represent what may be claimed to be major contemporary strands, thus leaving out other perspectives which earlier had a dominant position – Marxism being one obvious example. Furthermore, to a certain extent, the four forms outlined overlap. This is for example the case in the area of analyzing discourses of war and analyzing how war is commemorated and used by groups and societies to create collective identities. Despite these and other possible objections, the above outlined four forms of military history represent significant positions and approaches in current scholarship. Thus, they serve as a basis for the subsequent entries in this handbook about different types of military history.

## Military History Milieus

Military history is being developed across a number of publishing platforms and associations. There are several international peer-reviewed periodicals – the oldest being *Journal of Military History* published since 1937 by the US-based Society of Military History. Other influential journals are *War in History* published since 1994 by SAGE and *International Journal of Military History and Historiography*. The latter is affiliated with the International Commission of Military History (ICMH), one of the principal international venues for scholarly exchange of knowledge on military history. The Commission dates back to 1938 and is a semi-official body in the sense that many national commissions are embedded in the defense forces of their countries or indirectly depend on it by receiving financial or organizational support. The annual congresses by the Commission represent a unique meeting place for military practitioners and scholars, but are also characterized by a rather traditional, battle-oriented approach to military history. In addition, a number of university programs, defense colleges, and research projects offer recurring conferences on military history. There is, for example, a special track for military history at the annual conference of the International Society of Military Sciences (ISMS). Like the ICMH, the ISMS is a meeting place for both military personnel and civilian academics. Regional military history organizations like the US-based Society of Military History also host conferences, as does of course a variety of scholarly institutions on an ad hoc basis. At the national level, there are a significant number of chairs devoted to military history – not least in the traditional great powers, but also in smaller states like Denmark, the Netherlands, and Sweden. As mentioned above most national defense forces operate institutions tasked with researching and teaching military history. In the case of the United States, all services have specialized historical offices, employing a considerable number of historians; and even in small states like Denmark and Sweden the number of historians assigned with military history inside the armed forces constitutes distinct research environments.

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## In Conclusion

Albeit military history, as demonstrated above, comes in many forms and shapes, the defining matter is still, in the words of Michael Howard, “the study of the central activity of the armed forces, that is *fighting*” (Howard, 2006, p. 20). Military historians benefit from combining the methodologies from history in general with a solid knowledge of military affairs. Thus, in the future – as now – military history will be a venue where methods and theoretical debates from the craft of history and the social sciences in general engage with matters that often demand specialized military knowledge, and where civilian academics may benefit from drawing on the knowledge of military professionals. While military history does not necessarily offer any ready-made lessons to military practitioners, they on their side may benefit from military history as a way of broadening their perspective on what war is and how human beings react when at war. In order to do so, military history must,

however, as Michael Howard suggested, be studied in breath, depth, and context (Howard, 1962). In other words: When studying military history it is not only helpful to compare with other cultures and time periods; we also need to take into account the underlying societal forces and the sum of general factors in order to appreciate why, for example, why Japanese warfare had little room for musketry long after that weapon had been introduced on the island (Keegan, 1993).

Like all other types of human intellectual activities, the pursuit of military history reflects the society in which it is carried out; thus future research agendas and the basic theoretical and methodological assumptions of this subdiscipline of history are bound to change over time. Nevertheless, for the foreseeable future it is most likely that military history in its many forms and facets will continue to be characterized by dynamics already notable during the nineteenth and twentieth century: a utilitarian military-professional approach and a more broad-minded (and war-skeptical) approach to how military history is written; the latter primarily found among civilian historians.

### Further Reading

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### Cross-References

- ▶ [Application of Military History](#)
- ▶ [Classical Chronicle history of War and Military Operations](#)
- ▶ [Epistemology and Military Sciences](#)
- ▶ [Methodology and Military Sciences](#)
- ▶ [Military Biographical History](#)
- ▶ [Military Institutional History](#)
- ▶ [Oral Military History](#)
- ▶ [The War and Society School in Military History](#)
- ▶ [What is Military Sciences?](#)

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# Dynamic Intersection of Military and Society

Patricia M. Shields

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## Abstract

The military and society interact and shape each other every day. This chapter examines the diverse, interdisciplinary field of study that seeks to understand and explain that interaction. It begins by defining and situating the field’s origin story in military sociology and political science. Key scholars and events are highlighted to show how the field evolved as the world moved from the Cold War to the War on Terror and beyond. During that time the scope of the field grew incorporating scholars from around the world and across an array of disciplines. The chapter then narrows to discuss key topics central to the field – civil military relations, public opinion/popular culture, recruitment and retention, minority representation (women, minorities, LGBTQ), military families, and veterans’

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P. M. Shields (✉)

Department of Political Science, Texas State University, San Marcos, TX, USA

e-mail: [ps07@txstate.edu](mailto:ps07@txstate.edu)

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studies. The chapter ends with a discussion and examples of the methods scholars use to study established and emerging research questions.

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**Keywords**

Civil-military relations · Coups · Civilian control · Enlistment · Military sociology · Military family · Veterans

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**Introduction**

A nation's armed forces are designed to protect the society it serves. Both military and society have developed norms, rules, and theories which guide and explore this multifaceted relationship. Hobbes, for example, wrote of a "social contract where security is exchanged for the citizen's duty to obey laws of the sovereign power" (Burk 2002, p. 9). Sun Tzu and Clausewitz incorporated insights into this relationship in their classics *The Art of War* and *On War*. Sun Tzu speaks of the subservience of the military to the state: "If it is not in the interest of the state, do not act" (Tzu, XII.17), and "In war, the general receives commands from the sovereign" (Tzu, VII.1). Clausewitz's (1984, p. 87) most famous dictum "War is the continuation of politics by other means" speaks directly to politics and the societal objectives embedded in war. Thus, the role of the military as protector in society and the responsibility of the society to the military generate continuing issues and questions that make up the dynamic, multi- and interdisciplinary field of study known as "military and society."

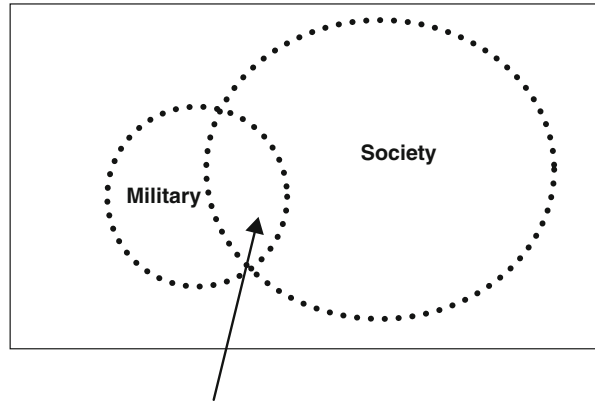
This chapter begins with definitions followed by an examination of the historical and institutional context. Next, topics generally identified as central to the field such as civil-military relations, public opinion, recruitment and retention, minority representation (including women), military families, and veterans are considered. This chapter concludes by examining the diverse methodologies used by scholars in the field.

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**Definitions**

The "military and society" field of study incorporates the spaces where society and military interact and influence each other. The simple Venn diagram of Fig. 1 illustrates the scope of the field. Dotted lines are used to depict the fluid and dynamic nature of the relationship. External factors such as the security environment, technology, and cultural mores create ebbs and flows which influence both. Also, the size of the overlap can vary. For example, during war the overlay grows dramatically.

The study of military and society examines policy and theoretical issues that arise as "military and civilian sectors negotiate their shared role in society and on the world stage" (Shields 2015, p. 564). It encompasses "all aspects of relations between

**Fig. 1** Military and society

The study of military and society lies at the permeable space where military and society intersect and interact.

armed forces, as a political, social and economic institution, and the society, state or political ethnic movement of which they are a part” (Forster 2005, p. 9).

This umbrella term encapsulates a sometime normative, diverse field which operates across national, organizational, and individual levels of analyses. A few examples illustrate the diversity of the field such as the factors that motivate a sailor to reenlist, the issues a veteran faces finding employment, how communities deal with base closures, civilian and military cooperation in peacekeeping operations, the conditions that lead to coups in failing democracies, disputes between civilian leaders and military advisors about the use of force, how deployed soldiers use social media, how military culture influences the integration of women into combat units, the challenges military families face during post-deployment, public support for the military, and the outsourcing of security.

It should be noted that this field is generally state-centered and that the overlap between military and society and the underlying issues states face can be very different. Compared to Western democracies, for example, African countries have a much higher risk of coups (McGowan 2005). Gay enlisted men and women will have a different experience in countries that have legalized gay marriage and ones that have not.

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## Historical Roots

As is clear from the Clausewitz and Sun Tzu quotes, concerns about military and society have a long history. The study of the relationship and connections between the armed forces and society as a self-aware field can be traced to World War II and the Cold War. Although clearly interdisciplinary, two disciplines, political science and sociology, during this period, placed a strong imprint on the study of military and society. Political science, with its robust subfields of international relations and

security studies, contributed to our understanding of military and society through civil-military relations and the problem of democratic control of the military. In *The Soldier and the State*, Samuel Huntington (1957) focused on the paradox that a military strong enough to protect the people could also use that power against the polity. Huntington's normative theory addressed the paradox through "objective control" whereby civilians were responsible for political and policy objectives while the armed forces had near-complete discretion in implementation, which meant civilian leaders gave the armed forces autonomy to manage their own affairs. In this environment, it was important to cultivate a strong professional ethos in the officer corps, which reinforced the notion of civilian control.

Sociologist, Samuel Stouffer, another founder of the field, led a team that applied survey research to study the experiences and attitudes of over 500,000 American soldiers in WWII (Stouffer et al. 1949). *The American Soldier* was a landmark book that ushered in the field of military sociology. Another sociologist, Morris Janowitz (1960), in *The Professional Soldier*, drew upon civic republican theory to connect soldier and state through the citizen's duty to serve and the society's obligation to those they put in harm's way. This provided a robust, normative, theoretical orientation to view the many interdependencies and interactions between military and society. In Great Britain this relationship has been formalized in the Military Covenant (McCartney 2010).

In the 1970s, after the end of the Vietnam War, the USA transitions from a draft to an All-Volunteer Force. The shift from conscription to volunteer military led to changes in the military organization. This was captured by, sociologist, Charles Moskos's (1977) Institutional-Occupational theory. He postulated that the military was losing its *institutional* foundations and was becoming more like an *occupation* where marketplace values displaced traditional values, recruitment appealed to pay increases, use of women increased, and soldiers' work and residence were separated. Although Moskos used the USA as his reference, subsequent studies showed elements of occupationalism in the militaries of Great Britain, France, Australia, Switzerland, the Netherlands, and Germany (Moskos and Wood 1988).

Military sociologist, Morris Janowitz, did more than anyone else to define the "military and society" as a field of study. Aside from contributing through his seminal scholarship and influential students, Janowitz recognized the need for scholars interested in the interface of military and society to develop a forum for exchange of ideas and to organize a professional association. In 1960, he founded the Inter-University Seminar on Armed Forces and Society (IUS) and in 1974 established the journal *Armed Forces & Society*, which he edited for 6 years (Sookermary et al. 2017). By 1986, an important sister professional association was formed in Europe – The European Research Group on Military and Society (ERGOMAS). Founders of ERGOMAS such as Giuseppe Caforio (1998) have written key books defining the military and society field of study.

The scholarly focus on topics under the military and society umbrella began during the Cold War when Western democracies operated in a high-threat environment. The dismantling of the Soviet Union ushered in changes captured in *The Postmodern Military: Armed Forces after the Cold War* by Moskos et al. (2000).

The changes included greater reliance on volunteer militaries, multipurpose missions, and weaker ties to the nation-state. The brutal terrorist attacks of 11 September 2001 and the subsequent wars in Iraq and Afghanistan further changed the security environment among Western nations testing the ties between military and society and shaping its scholarship in new ways. The challenges of mass migration, cyber-attacks, revived nuclear instability, and climate change will surely influence the ways military and society interact into the future. In the next sections, topic areas core to the military and society field are identified and explored, beginning with civil-military relations.

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## Civil-Military Relations

The field of military and society is intimately tied to civil-military relations, broadly defined as the relationship between civilian and military authorities. The separation of civilian (political) and military (operational) functions put forth by Samuel Huntington in 1957 underlies the literature of civil-military relations. In mature democracies, strong institutions and professional norms ensure civilian authority over national security and use of force decisions. The military generally has authority over doctrine, readiness, tactics, officer education, etc. A public divergence in point of view or preferences of civil authorities (president, prime minister, minister of defense) and military elites can undermine civil-military relations. Although rare, occasionally these differences can rise to open conflict. In the late 1990s, France's Army chief of staff's actions hit the front pages "when he publicly warned the President that the reforms he has initiated would not be implemented if the Prime Minister's recent budget decisions were carried out." Commentators interpreted this as an effort "to drive a wedge between a conservative President and a leftist Cabinet" (Boene 2000, p. 23).

Political scientist, student of Samuel Huntington, and presidential advisor, Peter Feaver (2009) developed a highly regarded theory of civil-military relations relying on principal-agent theory. He depicts civil-military relations as a strategic exchange where civilian principals rely on military agents to implement policy directives. When military and civilian preferences align, the military willingly carries out orders. Alternatively, when preferences deviate, the military has an incentive to shirk or undermine civilian directives. Civilian leaders create monitoring and punishment systems to ensure compliance with orders.

Dale Herspring (2005) developed a theory of civil-military relations, which focused on the personal relationship between elite civilian and military leaders. Civilian leaders rely on the advice of military elite well versed in the geopolitical environment. In day-to-day operations, perceptions of security threats can differ and lead to destructive conflict, which strains the relationship. Herspring found that strong civilian leaders who respect the military culture are best able to weather these conflicts.

“In the 1990s Dutch and Belgian Chiefs of Staff routinely threatened to resign in protest over drawdowns decisions of which the military disapproved” (Boene 2000, p. 23). Office resignation is a controversial action debated in the pages of *Armed Forces & Society*. Don Snider (2017) and James Dubik (2017) believe it is a rare but important tool that should be used by officers. They maintain that resignation gives officers a way to demonstrate moral agency and draw attention to policy that could threaten innocent lives. Richard Kohn (2017) and Peter Feaver (2017) counter that commanders who resign would improperly insert themselves into the policy arena, undermining civilian control.

Risa Brooks (2008) shows how the interplay of civil and military sectors can affect outcomes when states make decisions about fighting wars. She does this by focusing on strategic assessment, the method states use to consider strategies prior to interstate conflict. Flawed strategic assessment such as overstating a nation’s military capacity or failing to match military capacities and political goals can result in inept international deliberations and unnecessary war. Brooks (2008) identified information sharing, strategic coordination, authorization, and structural competence as the components of strategic assessment. Whether accepted or not, military leaders should be able to share their point of view candidly. This leads to honest and effective information sharing. Strategic coordination consists of institutional structures that evaluate alternative strategic choices, produce operational plans, and ensure alignment between policy objectives and military actions. Ideally, strategic coordination produces forthright exchanges about assumptions and risks. The immediate problems of translating strategy into action are effectively managed through authorization. Finally, the organizational capacity of the military to be self-reflective, e.g., officer promotion policies tied to competence not politics, refers to structural competence. She found that strategic assessment works best when civil-military agreement is high and civilians control the balance of authority.

Rebecca Schiff’s (2012) Concordance Theory focuses on the role of agreement (concordance) “between political and military elites and the citizenry” along four dimensions that “determine the role and function of the armed forces in society: (1) social composition of the officer corps, (2) political decision-making process, (3) recruitment method and (4) military style” (p. 318). She theorizes that when the level of agreement along these dimensions is high, military intervention is less likely. While her theory is applicable for mature democracies, it has been fruitfully applied in emerging democracies where threats of coups are more immediate (Salihi 2019).

Coups, or a military takeover of the government, are extremely rare in mature democracies. Autocracies and other types of unstable states face risks from inside the regime and from threats by popular mobilization (Bove and Rivera 2015). Not surprisingly, the literature of civil-military relations distinguishes between mature democracies, emerging democracies, and weak or unstable states (Degaut 2019; Barak and Miodownik 2019).

Unlike mature democracies, weak or unstable states are much more likely to experience a coup. Violent military coups can be regionally destabilizing and undermine a transition to democracy. The diverse literature on coups examines

topics such as the factors that lead to coups (McGowan 2005; Bove and Rivera 2015), the value and effectiveness of and steps these governments take to “coup-proof” their systems (Albrecht 2015; Rabinowitz and Jargowsky 2018), the recruitment of soldiers by civilians for coups (Kinney 2019), and ways the military can support state transitions to democracy (Degaut 2019).

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## Public Opinion/Popular Culture

Underlying democratic control of the military is support by the public for the armed forces and its actions around conflict. Both military and civilian leaders are sensitive to public opinion concerning military policy and the reputation of the armed forces. A gap in perceptions between the public, military, and civilian elite who craft security policy could undermine long-run public support particularly around decisions to use force. The literature examines variables that influence public opinion and asks what does the public know and what is the gap between actual policy and public perceptions? Second, is the public supportive of the military and security policy? And if not, by how much (Steinbrecher and Biehl 2020; Sarigil 2015)? Support for military by the public depends on a host of factors such as socioeconomic status, ideology, education, race, party affiliation, gender, and ethnicity as well as whether a person was native or born abroad (Burbach 2019; Simon et al. 2018).

One of the key questions surrounding public support is concern over civilian and military casualties (Shortland et al. 2019). When will the public support a war with a significant risk of heavy casualties? Using survey data Feaver and Gelpi (2005) examine casualty aversion and find that Americans are not unwilling to accept casualties even in a losing cause.

Public support is particularly important around the use of force. Golby et al. (2018) found that senior military leaders’ opinions enhance mission legitimacy (or lack thereof). When military leaders oppose an “interventions abroad, public opposition to the intervention increases” (p. 44). The public tends to follow military opinion in favor of intervention but to a lesser extent.

The literature also asks questions about how the military is portrayed by popular culture, particularly by movies, television shows, videos, and music. By analyzing these media, they gain insight into popular conception of a soldier, veteran, military bureaucracy, combat, etc. For example, Ender (2005) examined the representation of military children in film. He found that the cinema portrayal of the demands of military family life was inconsistent with reality. This study demonstrated a gap between a vision represented by the media and experience. Algra et al. (2007, p. 396) found that the Dutch media portrayal of veterans emphasized “failures and misconduct rather than the sacrifices of veterans.” An analysis of how regional news organizations portrayed veterans on their Twitter feed found charity case, hero, and victim as the most common frames (Parrott et al. 2019). In both studies, media used a narrow representation to capture and portray the veteran experience. News media also covers the military during war. Pinder et al. (2009)

studied how British forces perceived and evaluated the coverage. They found dissatisfaction with coverage, particularly when it led to undue fear among their families. The authors concluded that the media coverage can affect morale through its influence on the family.

Service members use media to communicate and maintain contact with family and friends during absences. Schumm et al. (2004) examined the use of letters, telephone calls, email, and audio or videotapes by deployed peacekeepers. The widespread use of social media platforms like Facebook has given soldiers the opportunity to network with their compadres and share their everyday frustrations and lighthearted moments (Stern and Ben Shalom 2019).

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## Recruitment/Retention

The military relies on members of society to fill its ranks. The literature on recruitment and retention generally focuses on efficiency, effectiveness (Woodruff 2017), civic responsibility, equity or fairness (Shields 1980), and motivation to enlist or reenlist (Woodruff et al. 2006). The Army takes civilians and turns them into soldiers. High-tech militaries seek recruits with the mental and physical ability to meet this challenge. New service members should also be able to adapt to the military culture and adopt its values. At the same time, the risks of military service and the importance of having an armed force that more or less resembles the society that it serves are also consideration (Liebert and Golby 2018, Hauser 2018). Universal conscription can enhance bonds and ties to the military and promote a civic culture (Wallenius et al. 2019).

A countries' recruitment method, volunteer or draft, depends, in part, on the threat level. Nations in a high-threat environment generally use conscription to ensure they have enough warriors to protect the nation. Currently, Israel and South Korea both rely on conscription. Cohn and Toronto (2017, p. 436), in a study of 99 countries over 40 years, examined when conscription or volunteer systems were used. They found that "states with British origins were less likely and those experiencing greater external threat were more likely to use conscripts" (p. 436). Further, states with tightly regulated labor markets were more likely to employ a draft. Are there battlefield consequences for the use of conscription? Yes, according to research by J. Paul Vasquez (2005). His study showed that democracies with conscription tend to have fewer casualties. This is attributed to greater political power among people affected by the draft to constrain policy makers.

Political and military leaders face unique fairness and equity issues when compelling military service particularly amid war (Shields 1981). During the Cold War, Western militaries generally relied on conscription to meet their manpower quotas. Under this system, the military could easily meet recruitment targets and automatically exclude individuals who failed to meet minimum requirements. After the Cold War, the militaries of Western Europe no longer needed to maintain a mass army. This eliminated a compelling need for conscription. As a result, most Western

nations have ended or modified their compulsory systems. Many of these systems retain draft registration and have begun requiring women to register (Bieri 2015).

When militaries transition to a volunteer system, they must compete in the labor market. This results in a very different set of constraints and organizational problems. Enlistment and the factors that motivate regular or reserve enlistment become among the most important concerns of volunteer militaries. Most studies, which examine enlistment motivation, draw in part from the Moskos Institutional-Occupational model. These studies examine enlistment motivation incorporating two sometimes competing underlying motivations – self-interest (pay) and intrinsic values that align with patriotism, duty, adventure, etc. Empirical studies consistently find that both self-interest and nonmarket values like love of country, adventure, and comradeship explain enlistment behavior (Bury 2017; Eighmey 2006; Griffith 2008). Genetic predisposition, family ties, or having a relative who serves also can increase the likelihood of serving in the military (Johnson and Lidow 2016; Miles and Haider-Markel 2019).

Militaries commit significant resources training and socializing their service members, who sign up for a specific tour of duty. Scholars study retention and reenlistment motivation because effective and cohesive militaries need to retain the skill and knowledge base of a sizable set of its initial recruits (Hoglin and Barton 2015). Unlike the new recruit, existing service members consider their experience with military culture and organization in their decision to reenlist or leave. Studies have shown that intrinsic attachment to the military has “positive effect on perceptions of the organization, social satisfaction, organizational identification and discretionary pro-organizational behaviors” which are associated with reenlistment (Woodruff 2017, p. 579). Self-interest also has a role; Jaiswal et al. (2016) found that extrinsic factors like low pay and job satisfaction as well as poor promotion opportunities were associated with attrition.

Critics of volunteer systems generally focus on the way it disconnects military service from civic duty and undermines the connection between military and a broad spectrum of society (Moskos 1981; Hauser 2018). This could result in an isolated military unrepresentative of the citizenry it serves.

Postmodern militaries also use contractors to take over functions previously performed by service members. This practice and the functions covered by contractors have grown substantially over the course of the last 30 years. As military contractors serve in combat zones and experience the inevitable combat-related death and injury, questions arise about the responsibility of society to private soldiers (Riley and Gambone 2016). Research on use of private security contractors is challenging because private companies can legally shield their business operations from public scrutiny. Swed et al. (2018) creatively took on this challenge by using publicly available records of contractor war dead as a proxy for contractor labor.



## Minority Representation

Military and society are interdependent. The military is shaped by the culture and belief systems of society and mirrors practices of the larger culture. Sometimes this leads to policies of exclusion or marginalization. Scholars have examined this phenomenon. The historical use of women is perhaps the most studied example (Fasting and Sand 2010). For millennia, the military ranks were purposefully filled by men. Women's formal responsibilities were limited to roles such as spies or prostitutes existing at the fringes of the camps (Holm 1992).

Variables such as military exigency, public opinion, culture, and technology have contributed to the very slow integration of women as full participants into the world's armed forces (Segal 1995; Shields 1988). One important example occurred when the newly developed telegraph brought news of the high death by disease rate among British troops during the Crimean War (1853–1856). Queen Victoria, adopting a mother-of-the-troops role, supported a radical solution. Great Britain sent Florence Nightingale and a cadre of women nurses to provide succor to the suffering troops and to save lives by incorporating newly recognized sanitary practices to the running of the filthy military hospital in Scutari. Although Nightingale faced stiff opposition from the military establishment, she and her nurses turned things around and lowered the rate of death by disease. Letters from recovering soldiers also influenced public opinion and helped to change attitudes. This example illustrates the power of the society/military interface. New trends in society (technology, public opinion, and a maternalistic Queen-as-ruler) changed the way an empire utilized women in its military (Attewell 1998; Shields and Rangarajan 2011). Nightingale's nurses did not wear a uniform; they did, however, pave the way for uniformed military nurses during WWI and WWII (Hacker 1981).

As women achieved the right to vote and pushed for additional responsibilities outside the home, Western military organizations have worked, struggled, and eventually succeeded in integrating women into all aspects of the force. The literature of women's integration is more diverse and polarized than most literature dealing with other "military and society" subjects. Scholars like Cynthia Enloe (2000) look at women in the military through the broader lenses of feminism and militarization of women's lives. Koeszegi et al. (2014) examine the challenges women soldiers in Austria face while working in a masculine culture of workplace aggression. Conservative critics question women's physical ability to serve as combatants and raise concerns about military effectiveness, readiness, and cohesion (Van Creveld 2000; Browne 2007). Empirical studies document the integration of women by analyzing organizational practices and policies and examining the attitudes and experiences of women and men service members as they participate in the transition (Cawkill et al. 2009). These issues are pertinent throughout the world even in places where women's rights are restricted. For example, Nilsson (2018) explored the experiences of Muslim mothers who serve as combat soldiers in Kurdistan, and Maffey and Smith (2020) studied Jordanian women who are stretching the traditional sex role boundaries while serving their society.

Military scholars have also turned their attention to the vexing problem of sexual harassment. Studies using Department of Defense-funded survey data document sexual harassment and then develop and test models to isolate the factors that explain it (Firestone and Harris 1999; Harris et al. 2018). Rosen and Martin (1998) study how harassment affects cohesion at the unit level. Crowley and Sandhoff (2017) studied men in combat units and found they used sexual harassment against military women as a way to communicate their lack of acceptance. The literature also examines ways to solve the problem. John Bennett (2018) argues that the military ethic can be used to develop systemic norms-based preventive policy.

The LGBTQ community represents another minority group receiving scholarly attention. The literature examines the policies of exclusion (Belkin and Levitt 2001, Belkin et al. 2013; Parco et al. 2015) and the experiences of the LGBTQ service members (Okros and Scott 2015). Current literature focuses on transgender acceptance (Ender et al. 2016) and questions about medical procedures and costs (Elders et al. 2015).

Militaries also deal with questions around integration of ethnic, religious, or racial minority groups. Military policies tend to reflect societal attitudes. Sometimes military policy stimulates change within society. Scholars in the field are particularly interested in this kind of dynamic. For example, in the USA, historically African American service members experienced segregation, discrimination, and abuse that paralleled their situation in society. The exigencies of World War II cracked rigid racial lines and gave African Americans an opportunity to demonstrate courage and valor. During the Korean War, troop shortages led President Truman to fully integrate the Armed Forces (1948). Subsequently, the military became a leader in race relations helping to move the entire country to reject racist segregationist policies (MacGregor 1981). Eventually, the military was recognized as a bridging environment that helped American minorities transition into the middle class (Browning et al. 1973).

Immigration patterns over the last 20 years have introduced new minority groups into Western societies. The militaries of these countries have had to adjust to the changing ethnic composition of their forces. One of the most important questions is whether service in the military provides a pathway to citizenship (Sullivan 2019).

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## **Military Family**

The military family sits at the nexus of society and military. The family can be a source of strength, love, and stress for a service member. Both institutions (military and family) require a high level of commitment and are considered “greedy institutions” (Segal 1986). A greedy institution seeks “exclusive and undivided loyalty” (Coser 1974, p.4) and undermines ties to organizations with competing claims. Women, either as service members or military wives, are particularly caught in the greedy web between military and family. They generally have primary responsibility for managing the household and nurturing children (Segal 1986). Women service members face the challenge of managing and thriving in both worlds. Military wives

often have additional responsibilities as their husbands respond to the demands of the greedy military institution they serve. Much of the literature on military families considers the work-life balance issues facing service members (Carvalho and Chambel 2018; Bellou and Gkousgounis 2015).

Deployment separates the service member from their family adding home front work for their spouse. Deployment causes anxiety and worry that can result in behavior problems among children. In addition, upon return the service member, their spouse, and children often have adjustment issues (Van Winkle and Lipari 2015; Skomorovsky and Bullock 2017). Military families face more moves than typical families. This can make it difficult for the military spouse to build their career. Studies have found employment and earning gaps between military spouses and their civilian counterparts (Meadows et al. 2016; Hisnanick and Little 2015).

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## Veterans

The study of service members who leave the military and return to the civilian world represents a microcosm of the larger study of military and society. Whereas military recruits are inputs that flow from society into the military, veterans represent outputs from the military that reenter society marked by their military experience. Both veteran and society must adapt and adjust to their return. This transition echoes issues such as how families adjust, public opinion about veterans, their voices in politics, challenges faced by women veterans, society's obligations to veterans, and concerns about veteran physical and mental health.

Surprisingly, there is no single definition for a veteran. The UK uses an inclusive definition: "Everyone who has performed military service for at least one day and drawn a day's pay is termed a veteran" (Dandeker et al. 2006, p. 163). The USA establishes veteran status using completion of a minimum period of military service, whereas Australia uses deployment to a conflict zone (Burdett et al. 2013, pp. 43–44). Veteran status can also be part of an individual's identity as it is for Zimbabwean soldiers in exile in South Africa (Maringira et al. 2015). Adam White (2018) recently expanded the scope of veteran studies to individual who served in combat zones as private military contractors.

Research on veterans focuses on issues around a successful transition from military to civilian life. "Veterans must navigate a complex cultural transition when moving between environments," and they can expect positive and negative transition outcomes (Cooper et al. 2018, p. 156). Finding suitable employment is generally top of the list of resettlement issues. The employment transition is facilitated when there is an overlap between military and civilian employment (Schulker 2017). In India, retiring veterans face a unique challenge, finding a spouse for their children and caring for their parents (Maharajan and Krishnaveni 2016). Society often develops programs such as education benefits and veterans' preferences in government hiring (Bailey et al. 2019), which can ease the transition.

For many years, the study of veterans almost exclusively looked at male veterans because there were so few women entering and thus few returning to society as

veterans. Recent scholarship has looked at the experiences of women and found a veterans' advantage for women in the labor market. Women veterans were "over-represented in higher paying occupations and underrepresented in the lower paying ones," and this was particularly true for women with a disadvantaged background (Padavic and Prokos 2017, p. 368). However, if a woman veteran left with a service-related disability, she was more likely to be unemployed (Prokos and Cabage 2017).

Life in the military can be dangerous and violent. Combat experiences can leave soldiers with post-traumatic stress disorder and other lifelong mental and physical health challenges (Hinojosa et al. 2019) which in turn can bring stress and result in family dysfunction, homelessness, drug and alcohol abuse, and suicide (Wolfe-Clark and Bryan 2017). The societal obligation to address these service-related disabilities has led to significant scholarship on programs and policies to mitigate these problems (Feinstein 2015).

Veterans and veteran programs also exert an influence on society. For example, how do veterans vote and establish party affiliation. Jeremy Teigen (2007) found that veterans were basically bipartisan, during the 2004 US presidential election. Christophe Lesschaeve (2019) found that veterans of Croatia's war of independence were more likely to vote for nationalist parties. But among these veterans, those who experienced physical or mental trauma were less likely to support nationalist parties. Studies also examine how veterans are distributed in the legislative bodies and how their presence influences deliberation and legislative agendas (Robinson et al. 2018; Best and Vonnahme 2019). Veterans can also organize and engage in political protest. China's retired officers have organized (occupying government offices, petitions, marches, law suits) to protest a poorly run pension system with delays and serious errors, corruption, and poor post-service employment opportunities (O'Brien and Diamant 2015). There is also evidence that military service can lead to greater civic involvement such as community service (Griffith 2019).

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## How "Military and Society" Is Studied

The methodologies used to study this diverse multi-/interdisciplinary field of study are as varied as the field itself. Its diverse methods derive from the many research problems, purposes, and questions found in the field. The methods range from the theoretical and philosophical to practical concerns such as exploring a new program designed to help veterans. Most research and scholarship is empirical, tied to established norms of inquiry and methodological rigor. It also generally supports implicit normative goals such as military effectiveness and professionalism.

The tension around the role of the military in politics can elicit philosophical commentary. For example, Menchaca-Bagnulo (2019) examined how the civic republican tradition in Western political thought adds to the debates surrounding officer resignation. Coletta and Crosbie (2019) drew on Aristotle and Machiavelli to examine virtue in the context of military political behavior. These commentaries link a vast philosophical and theoretical landscape to central issues of the field.

In the empirical world of data collection, methodological scholars have established three overarching research purposes – explanatory, descriptive, and exploratory (Adler and Clark 2008; Babbie 2007; Shields and Whetsell 2014). These categories are used to frame questions about how scholars of this field use data in their research.

Explanatory research asks the “why” question (Babbie 2007, pp. 89–90), by explaining “why things are the way they are” and by finding “causes and reasons” (Adler and Clark 2008, p. 14). Explanatory research uses hypotheses to articulate relationships. For example, Lewis et al. (2019) wanted to know what explained public support for transgender military members. They hypothesized that an individual’s personal experience with transgender people would influence their support. The literature was used to find reasons and empirical evidence (results of other studies) to justify the hypothesis.

Explanatory studies test hypotheses using quantitative data and multivariate statistical tests. For example, Pospieszna and DeRouen (2017) used bivariate probit analysis and the Global Terrorism Database (<https://www.start.umd.edu/gtd/>) to examine the influence of civil war mediation on the likelihood of rebel use of violence. For more information on databases used to study conflict, see Ye and Heo (2014). Explanatory research also uses experimental design. Jeremy Teigen (2013) manipulated television advertising and print materials to see the effect of military experience on voters’ impression of a candidate’s leadership potential and ability to handle defense and security issues.

Although far less common, explanatory research also uses qualitative data. For example, Risa Brooks (2008) wanted to explain the factors that influence the success of strategic assessment. She developed a set of hypotheses and tested them across eight case studies. She used data such as historical records, government documents, records of interviews, historical scholarship, transcripts, and press reports as evidence to test the hypotheses.

Explanatory research is the type of scholarship most often found in highly ranked journals (Avenier and Thomas 2015). In this world the wider the generalizability of the findings, the better. So, comparative studies, which include data from several militaries, would have greater generalizability and likelihood of appearing in a journal. This contrasts with single-country studies or studies that evaluate programs within a military. One should be mindful, however, that if the audience of the study is the military leadership of that country, the study has value because it fulfills a practical need and should be judged by how well it does this.

Descriptive research answers the “what” question and is not concerned with causes (Babbie 2007). Description provides baseline information. Before the “why” questions of explanation can really be formulated, “what” questions should be addressed. When scientists developed the periodic table of the elements, they were not only able to describe the elements, but they were able to use the descriptive framework to develop theories and explain what happens when elements are combined.

Soon after the USA implemented the All-Volunteer Force, scholars and policy makers were concerned that support for the military would drop. David Segal (1975)

surveyed the public in order to obtain “baseline data on the integration of the military [into society] by considering the civilian context” (p. 216). Forty years later, after the German military moved to a volunteer force, Francesca Fogarty (2015) surveyed soldiers about their perceptions of support for the military by the public. As is common with descriptive studies, both Segal (1975) and Fogarty (2015) used surveys and presented the data using frequency distributions and other forms of descriptive data presentation (charts, graphs). For a useful discussion of survey research in military settings, see Griffith (2014).

Descriptive studies can also ask “what” questions using documents, speeches, newspaper, literature, articles, Twitter, blog posts, and journal articles using content analysis. Sookermany et al. (2017) did a longitudinal content analysis of the articles in *Armed Forces & Society* journal to describe trends in authorship and affiliation. They found that over time the journal had proportionally more female authors and that the authors came from more continents, countries, and institutions. Master’s-level students have also used descriptive techniques to analyze the articles of *Armed Forces & Society*. Nathan Sexton (2003) used a framework from military sociology developed by Siebold (2001) to classify 117 articles of *Armed Forces & Society* between 1998 and 2003. The goal was to describe how the journal covered military sociology topics during the period. Christopher Brady (2010) described articles devoted to peacekeeping in *Armed Forces & Society*. He used a framework developed by the United Nations to classify the content of the articles. All the content analysis studies mentioned above used descriptive statistics to summarize their findings.

The scholars who do explanatory and descriptive research are expected to bring an unbiased objectivity to the task. They also tend to use deductive logic, which means the data is collected after a framework has been decided. When scholars test hypotheses, they are using deductive logic. In contrast, most exploratory research uses inductive logic. The qualitative data is collected without expectations of what the results will be. Data informs by speaking for itself. Researcher objectivity is not assumed; rather they are expected to use their experiences to help make sense of the data and to increase understanding of the subject matter (Willis et al. 2007). In-depth exploratory research adds to theory by generating hypotheses or identifying themes.

Exploratory research, like reconnaissance, is a type of inquiry that is in the preliminary or early stages. It “typically occurs when a researcher examines a new interest or when the subject of study itself is relatively new” (Babbie 2007, p. 88). Inductive exploratory research uses qualitative data like direct observation, interviews, focus groups, case studies, and evidence from documents or social media postings. Skomorovsky and Bullock (2017) used focus groups to get an in-depth picture of how children respond to their parent’s deployment. They used a grounded theory approach to code the focus group transcripts and identify four themes in their analysis. Neill-Harris et al. (2016) examined “partnerships between the military and local communities by exploring communication channels of the US military and civilian agencies” that provided services to transitioning military members (p. 585). This case study surveyed service providers near a military base and was then

followed up with interviews. They used the data to make preliminary observations about the partnerships at the case study location and to theorize about the nature of the “uneasy” partnerships they observed.

Neuteboom and Soeters (2017) explored how the Netherlands military personnel performed during periods when the military assumed the police function in three post-conflict areas. This retrospective comparative case study used intensive in-depth interviews and document analysis to trace the process used by the military organizations to deal with the security gap. Exploration can also use direct observation. Resteigne and Soeters (2009) explored the “nature of managerial work” in an ISAF mission by spending a day observing two commanding officers (p. 307). They used management concepts developed by Mintzberg to compare and contrast what they observed with private sector management.

Exploratory research can also have a smaller more practical scope. As part of his master’s capstone paper, Bradley Barrett (2017), a combat veteran, who worked for the Texas Veterans Commission explored and provided a preliminary assessment of a new program – Veteran’s Treatment Courts. These court programs, which focus on nonviolent offenders, use a jail diversion model and are designed as a non-adversarial approach “where prosecution, defense and judge share the same goal of ensuring participants do not reoffend” (Barrett 2017, p. 5). He interviewed administrators in three Veteran’s Treatment Courts and focused his questions on issues identified in the literature – screening participants, continuity of care, and measures of effectiveness. Information from the combination of literature review and interviews allowed him to develop several useful policy recommendations.

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## Conclusion

As can be seen by the long bibliography that follows, the literature of the military and society field of study contains many topics and methodologies. The literature highlighted in this chapter touched on most of the high-profile topics of the field. There are many more subjects not covered in this chapter such as the influence and role of religion, the blending of police and military roles, military policies to mitigate climate change, the business of weapon systems, the connection between terrorism and society, organizational responses to the threat of cyber security, and the role of the military in natural disaster. As the security environment evolves and society and military institutions continue to change, scholars and policy makers will be drawn to investigate and explain the links that tie military and society together.

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# Military and Religion

Yagil Levy

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## Abstract

In the post-Cold War era, there were many indications that religious authorities had expanded their influence within militaries, leading to growing interference in military affairs and provoking political debates. This chapter focuses on the relations between the military and religion. It starts by addressing the extent to which military-religion relations reflect the status of religion and the debates about its place in the broader society. Thereafter, it deals with religious diversity and its possible impact on religious intolerance, leading to the main section in

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Y. Levy (✉)

Department of Sociology, Political Science and Communication, The Open University of Israel,  
Ra'anana, Israel

e-mail: [yagille@openu.ac.il](mailto:yagille@openu.ac.il)

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which the key forms of “military-religion” are mapped, that is, the way religiosity is reinterpreted and militarily harnessed. Finally, the impact of military-religion on society are assessed.

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**Keywords**

Desecularization · Military ethics · Military-religion · Religionization · Religious diversity · Theocratization

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## Introduction

In the post-Cold War era, there were many indications that religious authorities had expanded their influence within the military, leading to growing interference in military affairs and provoking political debates. However, as Ron Hassner (2016a) identified, the scholarship on religion in the military lags behind post-Cold War developments, especially those prevalent in the US military engagements in Iraq and Afghanistan. Nonetheless, he considers the most developed area to be the study of religion in the context of civil-military relations.

Without an explicit agenda for filling in these gaps, this chapter focuses on the relations between the military and religion by mapping the main literature. It begins by addressing the extent to which military-religion relations reflect the status of religion and the debates about its place in the broader society. Thereafter, it deals with religious diversity and its optional impact on religious intolerance, leading to the main section where the key forms of “military-religion” are mapped, that is, the way religiosity is reinterpreted and militarily harnessed. Finally, the impact of military-religion on society are assessed.

The topic of relations between the military and religion is significant within the sphere of military-society relations because it captures several of the latter’s domains: the extent to which the military reflects broader society, religiously motivated changes in the social make-up of the ranks, and the social hierarchies created within them, diversity management, legitimization of violence and sacrifice, and more.

The military is conceptualized here in two dimensions: as an institution but also as a social sphere in which various groups interact and bargain over its character and identity. Religion is also conceptualized in two dimensions: as a set of symbols, identities, and values, and in terms of the religious actors who promote them, such as religious groups, churches, and chaplains.

Historically, the modern military is associated with secularism. Military organizations, at least of the Western type, are characterized as secular bureaucracies divorced from religious foundations. They are guided by formal rules rather than religious principles, and the recruitment and promotion of their personnel is conducted on the basis of merit rather than religious affiliation. Rational-legal principles, as ideally characterized by Weber, governed the military as a modern bureaucracy in sharp contrast to the traditional authority that predominated in premodern militaries (Soeters 2018, pp. 9–15). Nevertheless, not only have



militaries not been completely divorced from religiosity, but their permeation by religious authorities and trends has increased during and since the Cold-War era, as Hassner (2016a) noted.

The point of departure of this chapter is that since the 1980s, modern religion has returned to the public sphere in Western societies. This “deprivatization” of religion, as famously conceptualized by José Casanova (1994), is “the process whereby religion abandons its assigned place in the private sphere and enters the undifferentiated public sphere of civil society to take part in the ongoing process of contestation, discursive legitimation, and redrawing of the boundaries” (pp. 65–66). The public reemergence of Protestant fundamentalism as a force in American politics is one example (p. 3). As part of this process, religious institutions and movements try to reinforce their relationships with the military. However, this chapter will not engage with the debated issue about the extent to which militaries became more or less desecularized (or religionized) (see Levy 2020); desecularization comprises a strengthening of religious elements in the military’s culture, symbols, ethics, and conduct (p. 3).

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## Does the Military Mirror Society?

According to conventional wisdom, militaries largely mirror the processes taking place in the surrounding society, and do so without exception in affairs of religion, that is, the extent to which military-religion relations reflect the status of religion and the debates about its place in the broader society (Hassner 2014; Patterson 2014). Nevertheless, this argument does not consider variations in the level of the diffusion of religious values into the military. Here are some variations as suggested by the existing literature on military-religion relations.

First, socialization of soldiers towards readiness to sacrifice is inevitably imbued with nationalist sentiments at a level higher than that in the broader society. To this end, religious symbols are used as tools to recruit, mobilize, and motivate soldiers (see Hassner 2014).

Second, the level of secularization in society may yield contradictory outcomes for the military. The trends of denationalization, secularization, liberalization, and demilitarization of politics that take place in society may be reflected to a lesser extent in the military, where even opposite trends may also occur. In this case, extra-military processes may even encourage religious groups and movements to improve their position within the military, based on the assumption that, as a conservative organization, the military can be more attentive than civilian sectors to religious and nationalist values.

In this context, we can understand the evangelization of the US military precisely in the post-Vietnam era. Although society became more religiously diversified and more secular during the 1960s (Loveland 2014, pp. 17–19), the evangelists increased their influence within the military. As Andrew Bacevich (2005, pp. 139–144) maintained, the evangelists filled the vacuum created by the dwindling number of military chaplains provided by mainline Protestant denominations during the

unpopular Vietnam War, so they were in a good starting position thereafter. The military, for its part, allied with the evangelical movement – an alliance that was enhanced during the Reagan administration. This movement had a clear purpose: to reduce the emerging division between soldiers and society encouraged by the liberal elites' overt lack of respect for the military. Therefore, military commanders encouraged the growing involvement of evangelical chaplains to inspire and educate the troops.

Japan offers another example, especially since the 1980s, when the Japanese Self-Defense Forces (SDF) privileged the Shinto by cultivating private relations with their shrines, while treating other religious belief systems in a more neutral manner. It used Shinto to encourage national loyalty and military morale in an alliance that suited the SDF's needs more than alliances with other religions (Skabelund and Ishikawa 2014).

At the same time, desecularization in society empowers groups associated with religious and nationalist values, thus encouraging and legitimizing their attempts to culturally affect the ranks by amplifying nationalist and religious socialization. This was the situation in the Israeli military following the failure to resolve the Israeli-Palestinian conflict and the outbreak of the Second Intifada in 2000. Viewing the hostilities as a struggle between Jews and non-Jews, religious and right-wing groups promoted desecularization of politics (Ram 2008, pp. 69–71), which provided a tailwind to intra-military endeavors to religiously socialize the troops (Levy 2016, p. 322). This rule works in the opposite direction as well. Liberalization in society may help secular groups curb intra-military socialization informed by religious or other conservative trends, as has been the case since the 1990s when many militaries lifted the bans prohibiting gays and lesbians from serving equally.

Third, as these cases show, and as Ines Michalowski (2015) argued, the military may demonstrate a high degree of autonomy vis-à-vis its social environment and resemble it less closely when its organizational needs, mainly with regard to human resources, constrain its policies. For example, as Michalowski asserted, the need to attract new recruits, maintain social cohesion, and promote equality and religious liberty led the French Armed Forces to accommodate the needs of religious soldiers to a greater extent than in France's public sphere.

Surely, these interrelations work differently in conscript and volunteer forces. Conscript militaries reflect religion in society to a greater extent since they are more permeable to religious influences, and more committed to tolerating the religious needs of their recruits (Rosman-Stollman 2008, p. 617).

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## Religious Diversity and Intolerance

In part response to the empowerment of identity politics in society, of which the deprivatization of religion is an integral part, and given that the deprivatization of religion encourages militaries to largely mirror cultural trends in the wider society, militaries promote religious diversity as a layer of diversity management. They accommodate religious requests and recognize individuals' right to practice their religion by providing chaplains (or religious teachers), respecting dietary rules,

permitting religious apparel, and allowing time off for religious observance (Michalowski 2015). At best, diversity in the military helps mitigate extra-military tensions, as seen in the impact of the work of Muslim imams in the British military chaplaincy (Hafiz 2015).

Policies of diversity operate within a legal context of state-religion relations. Thus, for example, in the USA, tension around the work of evangelical chaplains arose between the two guarantees of the First Amendment: the right to practice one's own religion freely and the restriction on the federal government's endorsement of any particular religious belief or practice (Cook 2014, p. 181). In Japan, similar constitutional obligations required the SDF to respect the religious freedom of its personnel and not to engage with, or support, any religious practices; thus, the military has never had a chaplain service (Skabelund and Ishikawa 2014).

However, the character and boundaries of diversity are largely determined by the bargaining power of the groups involved, while their demands are largely bounded by the nature of their general agenda. Unlike other groups such as ethnic minorities, religious groups may seek to reshape military culture (Lomsky-Feder and Ben-Ari 2013). Furthermore, extra-military religious actors, such as churches and other religious associations, may gain a foothold within the military and thus an advantage over other groups.

Against this background, the military command may attempt to isolate the troops from religious influence that triggers intra-military tensions. For example, in the multifaith Indian Army, the command organizes its units around ethnic, rather than religious identities (Ahuja 2014, pp. 164–165). Furthermore, the military posts religious teachers instead of chaplains. These teachers must hold junior officer rank even if they are allowed to wear civilian clothes, but they are trained to socialize soldiers towards religious harmony and adherence to military rules (Ahuja 2014, 4359–4365; Rosman-Stollman 2015, p. 453).

Conversely, if the command fails to isolate the military from religious influences, the promotion of diversity may actually yield the opposite result – religious intolerance, or at least religious inequality, such as in the case of Japan's Shinto. As noted earlier, the US military encouraged the engagement of the evangelical movement in the military. However, this move has not promoted diversity. As early as the late 1950s, believing that their particular faith was the only "*true Christianity*," the evangelical movement regarded their military chaplains as fulfilling a missionary agenda aimed, *inter alia*, at converting military personnel to their faith. In this spirit, the evangelicals challenged military programs such as the Protestant General Service, which was adapted to the religious needs of a broader audience. Committed to the obligation to promote religious diversity, the military allowed evangelical chaplains to conduct separate services, departing from the previous, unified curriculum (Loveland 2014, pp. 170–188). Since the 1990s, for the first time, proselytizing became an issue in the military when the evangelical chaplains claimed the right to evangelize under the guise of the free exercise of religion, while simultaneously defending their right to incorporate sectarian content in public prayers (Loveland 2014, pp. 170–188). By 2012, evangelicals had taken over 60% of the military chaplaincy posts, while only about 17% of service members identified as evangelical

(Military Association of Atheists and Freethinkers 2012). However, the military establishment, albeit hesitantly and insufficiently, did contain the religious discrimination and proselytizing (Banerjee 2008; Hansen 2012, p. 197; Michaelson 2010).

A similar picture emerged in the Israel Defense Forces (IDF). Since the late 1980s, the conscript military has experienced a growing presence of (Orthodox) religious conscripts in combat units. This culturally marginalized group became motivated to use the military as a vehicle for social mobility and influence. Facing a lack of personnel caused by the decline in the motivation of the secular middle class to serve in combat roles, the IDF command encouraged programs integrating religious males into the ranks without compromising their religious faith. It also promoted religious diversity by strictly enforcing rules regarding dietary laws and observance of the Sabbath for all soldiers, in line with the compromise that had already been laid out in the state's first years by both secular and religious parties to enable religious youth to serve in the military without compromising their religious beliefs. In addition, since the 2000s, the Military Rabbinate has expanded its role from providing religious services to the socialization of secular soldiers (Cohen et al. 2016). It follows that, as in the case of the US military, the IDF allied with religious groups; the latter attempted to increase their stronghold just when the military was experiencing a process of liberalization and secularization largely reflected in the decline in motivation of the secular middle class (see Lebel 2016).

However, the more the religious presence increased, the more the religious sector translated it into demands that sought to reshape the military's culture and policies to make them more religious – demands to which the command acquiesced. This was most significantly manifest in the limits imposed on the equal service of women in the military to allay religious male conscripts' concerns about the violation of the rules of modesty. The command accepted the demands of the rabbis (the heads of the institutions where the religious soldiers had been educated) that religious men and secular women be kept separate in field units (Levy 2016).

As both cases show, it was the command's increasing reliance on the resources provided by religious actors that led to the shaping of new forms of military-religion.

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## Military-Religion

While the literature has addressed the topic of “religion in the military” (the largest contribution being Hassner's volume of 2014, cited extensively in this chapter), the concept of “military-religion” has not been developed. Religion in the military may have two interrelated meanings: the diffusion of religion into the military, and the increasing role played by military chaplains. While the first implies a preexisting culture that manifests itself in the ranks in a specific way, the second has been defined correctly by Hassner as a “narrow subject” (2014, p. 4).

By contrast, “military-religion” is not a unified culture. It means that an extra-military, preexisting religion, is diffused into the military but then may be reinterpreted and militarily harnessed in several domains and thus morph into multiple forms. These forms deviate from the confessional character of chaplains

and their associated churches and are not exclusively promoted, legitimated, or mediated by military chaplains. This section maps some of the main forms of military-religion that can be drawn from the existing literature on military-religion relations.

## **Military-Religion as a Civilian Religion**

In administering religious diversity, military-religion basically has similar content to religion in the civil sphere in terms of respecting religious practices. However, the content can be restrained to isolate the military from religious conflicts (as in the case of the Indian army) or, conversely, can be radicalized (as in the case of evangelization).

## **Military-Religion as Ethics and Morality**

New ethical dilemmas emerged following the changing nature of warfare that saw growing military engagement with noncombatants in urban conflicts, especially among Muslim communities. Military chaplains stepped into the vacuum created by the deficient provision of spiritual care and answered the spiritual and religious questions of both soldiers and commanders prompted by these new ethical dilemmas (Todd and Butler 2013). After all, the ethics of the just war were traditionally rooted in theological writing until they were supplanted by modern laws. In the post-Cold War era, chaplains became engaged in, and were trained to respond to, these issues, unlike the weakness they had demonstrated in this regard during the Vietnam War (Rock 2011).

Similarly, in the British army, with the empowerment of legal advisors, much of the work of defining what is moral is dealt with by asking what is legally permissible. In the vacuum this creates, chaplains (whose presence has increased) with close contacts with military commanders are often called on to advise on moral issues and play a key role in setting the moral limits of responses to insurgencies involving the treatment of noncombatants (Sedgwick 2013).

Religious ethics may have helped restrain aggressiveness among British troops as part of Christian culture's historical influence on the moral conduct of the soldiers (Snape 2007, p. 204). In contemporary wars, many chaplains see restraint as a component of the British military tradition of honor that should be integrated within operational behavior as part of military ethics. Some have even criticized military policies in accordance with the values of their faith communities (Todd 2009). Similarly, in the Canadian Forces, uncertainty about values emerged following cases of impropriety and abuse that occurred during the peacekeeping operation in Somalia in 1991. In the wake of this uncertainty, moral and ethical training featured more prominently, with chaplains playing an active role (Rennick 2014, pp. 52–53).

A different picture emerged in the US military. The portrayal of the war in Iraq and Afghanistan as a religious war, a clash between American values and Islamism (Marsden 2011, pp. 338–339), with “Jesus Killed Mohammed” as one of

its symbols, enabled the legitimization of aggression (Sharlet 2009). Religious socialization even encouraged anti-Muslim socialization in the military, in part by chaplains (Cook 2014, pp. 191–192). Similarly, in 2008, chaplains famously encouraged soldiers to spread messages of Christian faith among Afghanistan’s Muslim population (Pike 2009, pp. 9–10). Furthermore, if moderate chaplains fail to encourage soldiers to prevent brutality, they often assume a confessional role by listening and consoling those soldiers afflicted by guilt, and reassuring them that their actions were justifiable and their guilt unwarranted (Carlson 2009, pp. 58–61).

True, in the official guidelines of the US military it is clearly expected that chaplains act as moral checks, including criticizing commanders’ policies and decisions, and reporting immoral practices during combat. Nonetheless, there is no evidence that chaplains have ever acted in that capacity (Hassner 2016b, 2017–2020). Formally, events of misconduct (such as the torture of Iraqi prisoners at Abu Ghraib that came to light in 2004) encouraged commanders to utilize the chaplaincy for promoting training programs aimed at improving ethical conduct (Van Dyken 2008).

### **Military-Religion as a Liaison Service**

In Iraq and Afghanistan, US chaplains provided liaison services. They were tasked with communicating with local religious leaders to establish good working relations and function as trust-builders. As part of this policy, chaplains even worked to resolve tensions following confusing incidents that might have ignited hostilities (Carlson 2009, pp. 54–57). In 2009, this expanded role was institutionalized in the military doctrine (Patterson 2011, pp. 99–100). Furthermore, chaplains’ roles in advising commanders about religious issues expanded as well, even in the British military where chaplains were not tasked with a formal liaison or advisory role (Gutkowski and Wilkes 2011, pp. 114–118).

### **Military-Religion as a Psychological Resource**

Historically, chaplains assumed a primary position in roles as motivators alongside their conventional religious obligations (Hassner 2016a, p. 320); this role has expanded during the new wars. In the US military, chaplains create group rituals along with advisory meetings that offer soldiers psychological support by developing a sense of cohesion, camaraderie, and an emotional outlet through which the soldiers can cope with their fears, traumas, and even PTSD (Hassner 2016a, pp. 324–325). This kind of service does not necessarily involve religious issues, especially when offered to soldiers of different faiths. Ceremonially, the chaplains often lay their hands on the shoulders of the soldier in a gesture that highlights the power of touch as an element of healing (Walden 2011, pp. 33–37).

Indeed, “spirituality,” as an ambiguous concept, has become a valuable merit associated with physical resilience and ethical attitudes (which American commanders reinforced when the counterinsurgency strategy was launched in Iraq and

Afghanistan). Two of the three dimensions of spirituality in individuals are prayer/personal piety and connection to a faith community (Wester 2014). So, blurred lines exist between spirituality and religion, and spirituality may even appear as a softer, and hence less debated, form of religion.

To better understand the chaplains' power, the expression of fear by soldiers is perceived as a deviation from the masculine norm of military courage, and seeking psychological support services may mark the individual as "weak." Nonetheless, chaplains legitimize the soldiers' right to be fearful by listening to them empathically in what can be seen as confessional sessions, and addressing these fears by using a religiously oriented tool kit that includes organizing public prayers and physical touch.

Another example of this quasi-psychologist role undertaken by chaplains is the expanding role of the Military Rabbinate in Israel. In Operation Cast Lead against Hamas-ruled Gaza in December 2008–January 2009, military and civilian rabbis joined the ranks to "spiritually elevate" the soldiers. Among other things, the rabbis helped the soldiers deal with their fears concerning the fighting in the densely populated neighborhoods of Gaza (Levy 2020, p. 16). Providing mental support can be seen as an extension of Jewish theological writing on the rules of war about the duty to maintain morale within the ranks (Cohen 2013, pp. 155–156).

## **Military-Religion as Motivating Sacrifice**

A growing reluctance in society to sacrifice one's life in war, evident in the syndrome of casualty sensitivity which has been on the rise since the Vietnam War, encouraged militaries to seek ways to justify such sacrifices, especially the ultimate sacrifice, death (Ben-Ari 2005). Furthermore, since the 1990s, postmodern values have increasingly infiltrated the military in many industrialized democracies and challenged the traditional model of military culture that values comrades, service to the nation, obedience, conformity to the group, and sacrifice (Patterson 2014, pp. 235–236).

Hence religion can be used to motivate military sacrifices by portraying wars as religious wars and to socialize the troops accordingly. In the US military, President George W. Bush described the reaction needed after the September 11 attacks as a "crusade," and this perception became reflected in the rhetoric of many commanders (Marsden 2011, pp. 338–339). Officers described America's enemy as a spiritual enemy, the battle against which required religious values (Millonig 2006, pp. 6–7). More extreme views even theologized the mission, for example, as in one colonel's statement that, "The coalition [in the Iraq War] was merely a tool used by God to liberate Iraq from Saddam's tyranny" (Anonymous 2011, p. 94). In this spirit, evangelical chaplains portrayed the war in Iraq and Afghanistan as a religious war demanding unquestioned sacrifices (Cook 2014, pp. 191–192; Sharlet 2009).

In Israel, the religionization of politics has expanded since the 2000s in escalated clashes between Israel and the Palestinians. Subsequently, a theological discourse has permeated the military and played a significant role in Israel's wars against Gaza



since 2008, promoted by the increasing presence of religious combatants and the empowerment of the Military Rabbinate. In Operation Cast Lead, rabbis portrayed the battles as a campaign against the modern incarnation of Amalek, the first tribe that attacked Israel after the exodus from Egypt. For this sin, God commanded that Amalek and his name be absolutely wiped out, without sparing women and children. Escalation of this rhetoric was revealed later in the 2014 Operation Protective Edge when a religious brigade commander unprecedentedly issued a “battle order” in which he called on his soldiers to fight “to wipe out an enemy” who “curses, blasphemes and scorns the God of Israel.” He thus presented the battle against Gaza as a religious war (Levy 2016, pp. 315–317).

In general, religious portrayal helps enhance the social willingness to sacrifice, most notably by using religion to define what constitutes a threat (Hassner 2014, p. 5) and by training soldiers to believe in the absolute logic of right and wrong (Eroukhmanoff 2016, p. 372). Religion may take the sacrifice out of the cost-benefit equation since “the sufferings of the soldier are endured because the benefits of the social entity he dies for exceed the cost of his life” (Brænder 2009, p. 27).

Particularly instrumental is the religious idea of the divine chosenness of a nation (Smith 2003). Religion then helps portray the enemy’s nation as inferior by extolling the superior virtues of one’s own. Indeed, the Taliban were dehumanized for worshipping a different, “false” god rather than the West’s “true” God (Toros and Mavelli 2014). Mobilization for war can be based on symbolic exclusions marking and legitimating ethnic boundaries and hierarchies (see Gorski and Türkmen-Dervişoğlu 2013, pp. 202–203). A sense of exclusiveness and superiority thus makes the war socially meaningful and justifies sacrifices. Sacrifice is not demanded for the protection of land or economic resources but for the very identity of the fighting nation and its God-given moral beliefs.

For good reason, regions with higher proportions of evangelical Protestants consistently show higher enlistment rates than those with predominantly mainstream Protestants and Catholics (Maley and Hawkins 2018). Similar excessive motivation has been evident in the Israeli religious generation since the 1980s (Levy 2016). Likewise, religious narratives played an important role in motivating sacrifice among young Iranians during the bloody Iran-Iraq War (1980–1988) (Rouhi 2014).

At the same time, this definition of the threat and the inferior status of the enemy also help justify the use of force in the new debated wars, as the case of Israel exemplifies. In Cast Lead, by portraying the Gazans as Amalek, rabbis encouraged the soldiers not to show mercy to the Gazan enemy and thus to use an aggressive fire policy against enemy civilians, especially to spare the lives of Israeli soldiers. Such legitimacy is necessary in order to use aggressiveness to shift risk from one’s own soldiers onto enemy civilians and hence cope with the casualty sensitivity syndrome (see Shaw 2002). When questions about the use of force arise, religion may redefine the war as a more crucial endeavor and also help demonize the enemy, making them easier to kill (Johnson and Reeve 2013, p. 75).



## **Military-Religion as a Social Status and Symbolic Capital**

If public and military discourse as well as military chaplains inculcate in the soldiers the notion that military sacrifice is praiseworthy in religious terms, the status of those whose sacrifice is associated with the military's perceived religious mission is also appreciated vis-à-vis other soldiers. Practices of classification, demarcation, and hierarchies are thus created within the military. They can affect the real status of specific groups or at least enhance their self-image and, thus, substantiate their claim to higher status or recognition vis-à-vis other groups.

As Sharlet (2009, p. 42) explained, in the US military, the turn toward evangelical Christianity helped replace race with religion as a more legitimate social categorization in creating a separate identity of religious, white, male soldiers. Belonging to this group engendered a sense of superiority over the rest of society, which was viewed as weak and corrupt, and over soldiers from other origins. Evangelists thus fought a war on two fronts with mutually reinforcing impacts – externally, in Iraq and Afghanistan, and internally, a spiritual war against the rest of society.

Furthermore, the dominant us-versus-them discourse of conflicts waged by the US in Muslim nations shapes the military experiences of Muslim service members. Many of them have reported a questioning of their loyalty, discrimination, public disrespect, and even sanctions (Sandhoff 2011; Curtis 2016, pp. 53–68). In other words, the religious framing of the use of force affects the status of various social groups within the ranks.

In Israel, charged with a strong motivation to sacrifice, religious conscripts and their institutional system of yeshivas pictured a nostalgic return to authentic military values and commitment to decisive victories. Inasmuch as they became more noticeable in the combat units, religious groups portrayed themselves as a new service elite, fulfilling the mission of a Jewish avant-garde vis-à-vis the older, secular, liberal elite which was also perceived as weaker (Lebel 2016).

## **Military-Religion as Good Soldiering**

The religious impact on intra-military hierarchies may go even further by associating religiosity with good soldiering, enabling religious networks to use their religious faith as “symbolic capital,” in Pierre Bourdieu's (1986) terms, thereby claiming recognition of their military authority and competence.

The significance of the association between religious virtues and military competence increased with the overall trend toward postmodernism and liberalism that has spread within the militaries of industrialized democracies. To the extent that secular authorities in the military acknowledge this linkage, they promote religious values within the ranks. For example, in Britain during the two world wars, religion was historically associated with good soldiering (Snape 2007). In 2000, moreover, the British army published a document entitled “Values and Standards,” presenting the military's core values. The document uses recognizably Christian virtues such as selfless commitment, courage, discipline, and respect for others, and syncretizes

them with military virtues (Dobbin and Deakin 2014, p. 84). A comparable impact can be seen in the Canadian Forces, when a Muslim soldier asserted that “Islam really helps me in my duties because the disciplines of the religion carry over into the work ethic in the CF” (cited in Rennick 2014, p. 50).

A more extreme link is evident in the US military. Christianity is viewed by many officers as providing a suitable basis for shaping (or reshaping) the military’s culture, and as a means of curtailing the perceived threatening liberalization of this culture. Christianity is associated with courage; it is regarded as an antidote to trends towards gender equality (Millonig 2006, p. 8) and is viewed as a method for combating perceived immorality in the ranks, as well as a means of dealing with stress, loneliness, fear, and guilt. Christianity is also associated with respect for authority and the belief that spirituality is a trait of good military leadership (Anonymous 2011, pp. 113–120, 129–131). It is against this background that military commanders encourage the growing involvement of evangelical chaplains to educate the troops (Bacevich 2005, pp. 139–144).

Similarly, in Israel, in 2002 (during the Second Intifada), the military defined its collective identity as the military of the Jewish democratic state, committed to the strengthening of Jewish identity among its troops and enhancing their links to their land, values, heritage, and people. This trend bolstered the association between soldiering and Jewishness, and hence also privileged the status of religion in the military and increased the influence of rabbis who were seen as having the appropriate tools to re-educate secular soldiers (Levy 2016, p. 322).

## **Military-Religion as an Authority**

As Chaves (1994) noted, religious authority is legitimated by calling on some supernatural referent such as God. Therefore, intervention by religious authorities in the military may stand in sharp contrast to the basic principles of civilian control of the military in democratic societies, whereby elected civilians autonomously shape and enforce policies regarded as expressing the will of society as a whole, and in a manner guided by legal rules. A clear and unified hierarchy of command, from the political authority to the rank and file, is a prerequisite that might be intolerant of any external intervention. The clash of authorities is a substantial, not only a formal, issue, as we see now.

Intervention by a religious authority can take the form of theocratization whereby religious authorities operate in lieu of, or in tandem with, the civilly sanctioned military system, whose opinions and jurisprudence carry significant symbolic weight (based on Hirschl’s [2008] constitutional theocracy). This pattern typifies the case of Israel in which the military has been partly theocratized with the intervention of civilian rabbis in military affairs, as noted above, in the domain of intergender relations (Levy 2016). A clash between the legally prescribed principle of gender equality and the religious principle of women’s modesty was apparent.

Another form of theocratization is the creation of dual hierarchies in which the regime controls the military by creating mechanisms of control operated by religious

authorities that run parallel to the normal military chain of command. Religious authorities can engage in the religious and political socialization of the troops without affecting decision making. This model typified the Parliament army of England in the mid-seventeenth century, as an indirect mechanism of control by Parliament vis-à-vis the King (Herspring 2001, pp. 55–77). In a different manner, the post-revolutionary Iranian military was supervised by the Ideological-Political Directorate whose role was not only to engage in religious socialization but also to influence promotion and other military-related matters in parallel to the formal chain of command (Rosman-Stollman 2008, pp. 620–621).

At the minimum, a clash of authorities can be created even without a clear theocratization, when the location of chaplains within the military hierarchy is blurred because of their affiliation with the churches that send them. In the USA, the churches' endorsement of the chaplains' nomination is required, and it is to their churches that most owe their primary loyalty (Hansen 2012, p. 163). Against this background, clashes over issues like the service of homosexuals (Hansen 2012, pp. 169–170) and proselytizing arose. Furthermore, anti-Muslim socialization undermined the administration's efforts to prevent Muslims from interpreting these campaigns as an anti-Muslim crusade (Cook 2014, pp. 191–192). In a somewhat different format, in Britain, although the churches have lost control over the appointment of the military's Chaplain General (Howson 2011), there is an inherent tension in the chaplains' commitment to their community and to the military, forcing them into a "cultural juggling act" (Todd 2009, p. 78).

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## How Does Military-Religion Affect Society?

If the scholarship on the relationships between the military and religion is under-developed, the impact of the military on religiosity in society is even more so. Here are three impacts raised in the literature.

First, intra-military practices not only shape the form of military-religion but also create new social categories and even identities that can be extended to civilian society. For example, the US military promoted religious diversity during the world wars. In turn, inspired by pluralistic and universalist visions that permeated American life, groups claimed the extension of their religious rights, gained by military service, to the civil sphere (Stahl 2017).

Second, power relations in the military may be replicated in society. In the context of military-religion relations, for example, the increased integration of religious conscripts in the IDF created a young, religious generation claiming integration within the Israeli power elites, and discarding its previous marginalized status (Lebel 2016).

Third, the military's biases to privilege one religious faith over the other, or secularism over religiosity, affect its relations with other social groups, as attested by the case of the SDF (Hassner 2016a, pp. 318–319).

## Summary

This chapter aimed at contributing to the underdeveloped literature on the relations between military and religion. This topic became relevant since religious tensions were aggravated by the Western interventions in Iraq and Afghanistan, and the overall trend of deprivatization of religion that inevitably affects militaries as public spheres.

Several insights can be obtained from this chapter. First, scholars should consider variations in the level of the diffusion of religious values into the military in ways that do not symmetrically mirror the processes taking place in the surrounding society. Sometimes, it is secularization in society that can encourage the opposite process in the military. Second, because of the unique character of religious groups, attempts to implement religious diversity may yield the opposite, and unintended consequence of religious intolerance. Third, religiosity is reinterpreted and militarily harnessed, and thus morphs into multiple forms of military-religion. Although this chapter has not engaged with the debate about whether militaries become more or less desecularized, it is safe to conclude that the more military-religion morphs into multiple forms, thereby expanding its domains of influence, the higher the level of desecularization of the military (Levy 2020).

Future research should expand on these areas and further validate or refute the insights presented here. However, studying this topic involves methodological challenges. As Ben-Ari and Levy (2014) suggested, access to the study of the military at large entails both organizational difficulties of entry into the armed forces and issues related to the kinds of knowledge created by researchers. In this case, the issue of unobstructed access to troops is less significant to the extent that religious actors often work along the seamline between the military and society. However, access to combat units to observe religion-in-action may encounter the typical problems. No less significant a challenge is framing the kinds of knowledge expected to be produced. It may take three main forms: (1) empirical-analytic knowledge that typifies most of the studies undertaken and cited in this chapter, such as that pertaining to chaplains; (2) cultural-hermeneutic knowledge that relies on interpretive methods, such as the endeavor to interpret the meanings of social actions, as conducted by Brænder (2009); (3) critical theory aimed at exposing the constraining structures of power, in this case, for example, by showing how military-religion is used to legitimize aggressiveness (Levy 2020). The challenges lie ahead.

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# The Roles of Military and Civilian Forces in Domestic Security

Rasmus Dahlberg and Anja Dalgaard-Nielsen

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## Abstract

This chapter addresses the intersection of military and civilian forces in domestic security, taking its point of departure in the recent deployment of troops in anti-terror operations in France and a general shift toward stronger involvement of military forces in what have traditionally been police matters. We introduce the research field beginning with classic sociological texts from the 1950s with an emphasis on the scholarly debate from around 2000. Building on the literature we discuss different drivers behind the shift toward militarization of domestic security affairs. Finally, we present a variety of suggestions for approaches to further research in the field.

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R. Dahlberg (✉)

Institute for the Study of Military History, Culture and War/Royal Danish Defense College,  
Copenhagen, Denmark  
e-mail: [rada@fak.dk](mailto:rada@fak.dk)

A. Dalgaard-Nielsen

Institute for Strategy/Royal Danish Defense College, Copenhagen, Denmark  
e-mail: [andn@fak.dk](mailto:andn@fak.dk)

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**Keywords**

Civil-military relations · Para-military policing · Constabulary force · Domestic security · Terrorism · Risk · Societal security · Gendarmerie

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**Introduction**

In January 2015, the French government launched one of the largest military operations since the Second World War. It did not concern an international conflict or the protection of French territorial integrity against an external enemy. Rather, *Opération Sentinelle*, involving at one point up to 10,000 troops, entailed the deployment of soldiers to guard tourist sites and patrol the streets of French cities against an obdurate terrorist threat that may come from within or from without. France is, however, not the only Western country to have expanded the use of armed forces for domestic purposes in recent years (Schack 2016; Johansen 2017). Whether spurred by perceived threats from terrorism, organized crime, irregular immigration, or lawlessness in the wake of natural disasters, numerous countries have moved toward greater involvement of the armed forces in domestic security, including support for national and local police forces.

Police and military are usually understood as two separate entities with different tasks and logics. While police forces traditionally have been responsible for internal security and the upholding of public order, the military's primary task has been defending the territory and interests of a state against foreign enemies. However, these definitions, building on a strict separation of state and societal security, have been questioned by a group of leading scholars in the field (Easton et al. 2010). From the earliest days of state-building, chieftains and kings needed armed forces to provide external as well as internal security. In the Middle Ages, constables and marshals were tasked with keeping order in the armies and garrisons, and gradually their jurisdiction was expanded to also include the general public. Modern policing, with its etymological roots in the French word for "public order," originates from seventeenth- and eighteenth-century France and England, when the first permanent, uniformed police forces were created. During the Age of Absolutism, however, the kings of Europe did not distinguish between military and civilian forces when providing domestic security. Only after the democratic revolutions and the process of rapid urbanization in the middle of the nineteenth century the responsibilities for external security (military) and internal security (police) in general became separated (McCrie 2006). From a broad historical perspective, the strict separation of police and military is thus a modern invention that presents itself more as a temporary phenomenon than a fundamental condition.

In this chapter, we first outline the key scholarly positions as to what drives the apparent recent increase in military involvement in domestic security, primarily from a Western European perspective, but with digressions and comparisons to other parts of the world. We then discuss which risks it involves when seen from a military and from a civilian perspective. Finally, we point to areas where more research is needed

to understand and assess the drivers and implications of the use of armed forces in domestic security.

## Introducing the Research Field

Relations between civilian and military forces have traditionally been studied mostly by US scholars beginning with political scientist Samuel Huntington's seminal work *The Soldier and the State* (1957). However, Huntington's aim was to analyze civilian control of the military, which in his opinion should be objective to allow professional soldiers autonomy within a clearly defined framework, and his book did not specifically address the question of armed forces in policing roles. Sociologist Morris Janowitz' notion of "constabular force," presented in *The Professional Soldier* (1960) which was written as response to Huntington's book, on the other hand proposed a civic-republican theory encouraging a participatory approach that involved both the civil and military society. Janowitz claimed that Western armed forces were undergoing a process of "constabularization" by using limited force to reestablish stability quickly in small-scale conflicts, thus creating military forces resembling police forces in order to avoid total nuclear war. The dual roles of warring and policing remained, however, in Janowitz's conception, roles to be acted out internationally, where the "constabulary officer" could apply violence in tightly controlled and limited circumstances, retaining close links with the society he was protecting (for a post-Cold War discussion of Huntington and Janowitz' contributions, see Feaver 1996 or Burk 2002).

Recently, scholars have noted a process of convergence, not just between the roles and tasks but also between the organizations, approaches, and cultures of military and civilian forces in Western European countries (Bigo 2000; Campbell and Campbell 2010; Dunlap 1999). Internationally, the argument goes, armed forces are called upon to deter potential state adversaries, but also to engage in counter-insurgency and stabilization missions with an eye to building local institutions capable of and willing to cooperate in the management of transnational problems like terrorism, organized crime, and irregular immigration. Force must be used sparingly and precisely in order not to undermine local support and the legitimacy of local partners. Domestically, the argument continues, military forces take up more security tasks, while non-military forces (police, border guards, etc.) are increasingly using military equipment and tactics. Policing is also increasingly intelligence-led and aimed at predicting and preventing crime, thus mimicking military approaches. The result, according to these scholars, is an increased cooperation between institutions that are in a number of respects different (Dunlap 1999, p. 220).

Not everyone agrees, however, that this trend is significant and/or truly new (Weiss 2011, p. 400). Several scholars call for additional country case studies guided by clear concepts and definitions, e.g., is it possible to register convergence in norms, culture, approach, tactics, tasks, etc. to arrive at a more finely grained understanding of whether and where increased cooperation is happening (Kalkman 2019, p. 4; Weiss 2011, p. 402). A common denominator in the literature, however, is that a

renewed and reinforced threat from terrorism, especially since the early 2000s, has driven police and military toward each other. Though one may debate whether the expansion and proliferation of domestic roles of armed forces represents a qualitatively new or simply a quantitative development, there is broad scholarly consensus that the trend is real: Armed forces increasingly guard potential targets of terrorist attack, patrol the streets, and assist in emergency response or in countering organized crime within national borders (Clarke 2013, 69; Kalkman 2019, p. 2). Parallel with developments in domestic security, armed forces are also becoming increasingly involved in disaster relief and response, challenging the Oslo guidelines on the use of military and civil defense assets for such purposes published by UN OCHA in 1994, which stated that military foreign aid should be considered a last resort. American military forces were heavily engaged in response and relief efforts during the hurricane disaster in New Orleans in 2005 and the Haiti Earthquake in 2010, and the US Armed Forces also assisted Japan when an earthquake generated a tsunami resulting in a nuclear disaster in 2011 (Fisher 2011).

One version of civil-military entanglement is *gendarmerie* (military units with constabulary powers), embodying the convergence of civilian and military use of force in a single unit. The French *Maréchaussée* was established in 1720 for territorial control and renamed the Gendarmerie Nationale in 1791 during the French Revolution. The gendarmes, who have traditionally been responsible for law and order in the rural parts of France, even if they are formed and trained as military units, reside under the Ministry of the Interior with close connections to the Ministry of Defence, and the gendarmes abide to military law (Gobinet 2008). Apart from the Gendarmerie, France also has a strong tradition for using regular armed forces for internal security purposes. In 1947, 10,000 soldiers, including paratroopers from French Indochina, were inserted to crack down on Communist protesters at the Renault factories (Stevnsborg 2018). The Algerian struggle for independence in the 1950s and 1960s also saw French use of military force to ensure internal security. This created a tradition in France for strong police-military entanglement, governed by a complex set of laws and regulations, with a high degree of governmental freedom and few parliamentary restraints. Another version of civil-military entanglement is the para-military state security organizations traditionally associated with Soviet bloc during the Cold War and the successors hereof. While civilian, often under the Ministry of Interior or Security, these organizations employed military discipline, tactics, and logic, although applied to internal security threats rather than external. Some scholars argue that today's semi-state security forces such as the "Wagner Group" derive from this tradition (Marten 2019).

## Drivers of the Involvement of Armed Forces in Domestic Security

Scholars from different academic traditions – political science, legal, historical, organizational, and critical – have pointed to a variety of drivers of the increased military involvement in domestic policing tasks (Edmunds 2006, p. 1061; Kalkman 2019, p. 2).

For the sake of overview, we classify them into (1) exogenous macro-level changes in the international threat and risk environment; (2) domestic political, economic, institutional interests, which gain from framing problems as security threats that call for a militarized response; and (3) societal and organizational attempts to cope with complex challenges, leading to organizational “mimicry” whereby armed forces and police forces increasingly look and behave alike.

### **Changing Risk Environment**

The first group of scholars mainly emphasizes exogenous and functional drivers, such as evolving and growing transnational problems like terrorism, organized crime, irregular immigration, or natural disasters growing more frequent and severe due to climate change. These challenges, the argument goes, transcend borders and threaten to overwhelm police forces and civilian authorities and capabilities. The nature of the current threat and risk environment therefore calls for a greater level of military-police cooperation and for the military to assist the police and other civilian authorities with more tasks (Kalkman 2019, p. 2; Schnabel and Krupanski 2012, p. 64). The military, they argue, possesses special capabilities and readily available manpower, which can be put to use in exceptional circumstances (Schnabel and Krupanski 2012, pp. 39–40). Policymakers and official policy documents argue along similar lines – deploying military personnel and assets in support of the police is depicted as a natural, reasonable course of action, which reflects current threats and ensures efficient use of overall national capabilities and resources (Nielsen and Domino 2018, p. 4).

### **Interest Politics**

Other scholars have instead emphasized the domestic, political, societal drivers of the increased involvement of armed forces in domestic security. In the wake of the Cold War, they point out, armed forces, defense industries, conservative politicians, etc. needed new *raison d’êtres* and sources of income. Getting involved in internal security provided a way for armed forces to demonstrate their utility and legitimize their budgets (Campbell and Campbell 2010, p. 337; Clarke 2013, p. 80). Problems like international terrorism, organized crime, and illegal immigration may be real, these scholars argue, but it is important to pay attention to how the practice of European security agencies frame these phenomena as security threats that warrant new responses, among them the participation of armed forces in maintaining internal security (Bigo 2000, p. 178).

### **“Institutional Mimicry”**

Finally, some scholars point to organizational processes whereby organizations “mimic” other, apparently successful organizations and thus become increasingly alike. Such processes might happen in situations of high complexity and absence of agreed-upon measures of success vis-à-vis the organization’s performance. Mimicking other successful and legitimate organizations, an organization “borrows” from those organizations’ legitimacy. While these scholars are not necessarily uncritical of the increased involvement of armed forces in domestic security, they do not see this

as part of an overarching malign scheme on part of conservative politicians and security agencies. It results, according to this argument, from improvisational, ad hoc organizational attempts to navigate a complex risk environment while preserving organizational legitimacy (Campbell and Campbell 2016, p. 348).

## **Military Involvement in Domestic Security: Risks**

While a majority of Western citizens express trust in their armed forces and, for example, in the case of France, overwhelmingly support the troops' presence in the cityscape, critical voices from within and outside of the armed forces have been raised (Clarke 2013, p. 80; Chrisafis 2016). While trust in the armed forces is generally high in most Western democracies, the current trend of domestic military involvement, critics argue, risks undermining the combat readiness and morale of troops as well as civil liberties and, ultimately, at least in less well-established democracies, civilian control of the armed forces (Johnson 2018). This section expands on the risks when seen from a military and civilian perspective, respectively.

### **Reputation, Morale, and Combat Readiness**

On May 20, 1997, a group of US Marines accidentally shot to death an American high school student during an anti-drug patrol along the US-Mexican border. An investigation by the US House of Representatives left a number of questions about the exact reason for the shooting open. However, it did point out that the Justice Department, which had requested the patrol, failed to ensure that the Marines were trained for law enforcement tasks or briefed on local conditions. The shooting led to local protests and to an end to the use of military forces for anti-drug patrolling along the border (Suro 1998).

On November 13, 2015, a group of terrorists attacked the concert hall Bataclan in Paris. Though lightly armed police and more heavily armed soldiers arrived within a short time, the soldiers rejected the police officers' request to help move into the concert hall, arguing that they were not authorized to do so. It took another 30 min for special police units to arrive and initiate the hostage rescue operation (Schack 2016, p. 4). This incident highlights the potential reputation risks to the armed forces once involved in domestic policing, even if French citizens overwhelmingly approve of the massive presence of soldiers in the cityscape (Clarke 2013, p. 80; Chrisafis 2016). Excessive use of force or a standoffish attitude in a moment of crisis could conceivably both be damaging and chip away at an otherwise favorable public image of the armed forces. It highlights the importance of a clear legal framework, clear rules of engagement, and appropriate training and preparation of troops but also, as in the Bataclan incident, the ability to understand and react flexibly to extraordinary situations in tight coordination with the police.

Guard duty, riot control, and patrolling in a domestic context may undermine morale and make recruitment to the armed forces more difficult (Dunlap 1999, p. 224). Soldiers sign up for warfighting and international operations, not for domestic tasks, the argument goes. Domestic counterterrorism tasks, however,

may conceivably be perceived as highly meaningful to many troops, at least in the months following a major terrorist attack, where a heightened sense of patriotism can often be registered in the affected country. There is currently a lack of systematic research into how the members of armed forces perceive different domestic tasks in terms of importance and meaningfulness and therefore no definitive answer as to their impact on morale (Kalkman 2019, p. 5).

Another risk, pointed out by critics, is the loss of training time, combat readiness, and a deterioration of the troops' "savoir-faire" (Gen. Vincent Desportes, cited in Chrisafis 2016; Dunlap 1999, p. 223). Not all agree, however, that domestic tasks make the armed forces less effective internationally. Wass de Cwege (2006, p. 15) argues that the need to flexibly shift between different roles is indispensable and integral to any armed force with the ambition to match the current diverse and unpredictable threat environment and that the track record of the US Armed Forces from the 00s show that they have the ability, at least when properly trained and led, to do so. Clarke (2013, p. 80), on the other hand, points out that the domestic tasks may even provide valuable training and experience in operating in an urban terrain in close interaction with civilians – skills also needed in international counter-insurgency and counter-stabilization missions.

## Utility

From a more general point of view, critics have questioned the utility of deploying armed forces for domestic security tasks, specifically counterterrorism, and argued that in some instances it could be outright counterproductive. Militarizing the handling of terrorism plays into terrorist groups' war rhetoric and inadvertently supports their attempt to fashion themselves as legitimate warriors. Militarizing the response to terrorism, the argument goes, risks boosting extremist groups' recruitment narratives while adding little to society's overall security, as determined terrorists are simply going to avoid heavily protected targets. They also indicate that it might be politically difficult to scale down the level of visible and protective security – what is the exit option with the terrorist threat likely to continue for the foreseeable future? The deployment of soldiers in domestic security roles, it is argued, risks diverting necessary investment in civilian capabilities and agencies, which would represent more appropriate responses to the challenges at hand (Edmunds 2006, p. 1074; Schnabel and Krupanski 2012, p. 56). In the words of Clarke (2013, p. 82), unless the impulse to let the armed forces handle an ever-widening array of domestic tasks is checked, European countries may end up with "a very expensive, improperly equipped, and overqualified emergency response instrument instead of a functional military force."

## Civil Liberties and Civilian Control

Deploying military assets and military personnel to assist civilian authorities in coping with terrorism, organized crime, and natural disasters may appear logical, necessary, and undramatic to a majority of citizens. According to critics, however, it

potentially affects fundamental civil liberties and crucial balances between armed forces and civilian democratic authority. Around the year 2000 scholars debated the tension between combating crime and protecting civil rights after demonstrations had turned violent during summits in Prague, Gothenburg, and other European cities (Flyghed 2002). Then came a wave of terrorism, beginning with 9/11, Madrid (March 11 2,003), London (July 07 2005), and Scandinavia in 2011 (Norway), 2015 (Denmark), and Sweden (2017) not to forget the attacks on London Bridge on June 03 2017. These events changed the political agenda in many Western European countries (Source).

Several scholars point to essential differences between the culture, norms, and worldview of police forces and armed forces. The former “serve, protect, gather evidence, arrest suspects” (Campbell and Campbell 2010, p. 329), whereas the latter “overwhelm, kill, and destroy” (Dunlap 1999, p. 223). Underlining this point, the different skills and attitudes required in an infantry soldier and in police patrol officers are highlighted: Police officers typically need to exercise a higher level of competency when it comes to communication, judgment, persuasion, negotiation, etc. (Campbell and Campbell 2010, p. 343). Since Western democratic states need to maintain order *and* legitimacy, the core premise of domestic police forces is to apply minimum force, whereas the military, at core, is about winning wars by applying maximum force. The military simply cannot be expected to display the same sensitivity to civil liberties as police forces according to these scholars (Weiss 2011, p. 401). Currently, the empirical evidence on how national armed forces have been trained and prepared for domestic duties and how they have actually performed compared to police forces is largely missing, although research in this field is beginning to emerge (Norheim-Martinsen 2019).

In addition, the involvement of soldiers domestically risks undermining democratic control of the armed forces. Edmunds (2006, p. 1072), highlighting the implicit or explicit encouragement of closer police-military integration in Western countries’ external military assistance and security sector reform assistance, argues that the involvement of the armed forces in domestic security historically has led to politization, political meddling, and human rights abuses by the armed forces. Even if this may not be evident or imminent in the context of established Western democracies, the argument goes, increased involvement of and dependence on armed forces when it comes to domestic security could gradually upset the balance of power between civilian and military authorities (Kalkman 2019, p. 5).

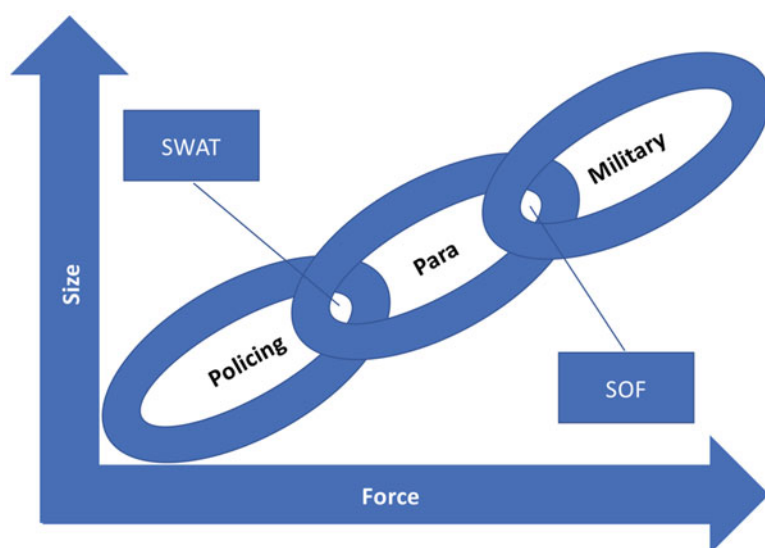
To sum up, critics have pointed to a range of risks to combat readiness, morale, recruitment, civil liberties, and civilian control and questioned the overall utility of involving armed forces in domestic security and in counterterrorism. Currently, however, the empirical evidence is limited and mixed. More studies are needed to provide clearer answers to how imminent and grave these risks and challenges are and how they apply to countries with different traditions in terms of police-military relations.



## What and How to Study?

The field is open to enquiries taking a variety of approaches. Besides studies of the drivers and risks of the greater domestic involvement of the armed forces, one could study the impact of different national traditions. In France, for example, there is a tradition for civil-military cooperation in domestic security due to its imperial history (Bosser 2015), while Germany represents a different tradition with a strong aversion against domestic military involvement (Lioe 2011). One may study the implications of “inoculation” as in the German case with the “Polizeibrief” following the atrocities of the Hitler era (or Sweden after soldiers opened fire on workers on strike in Ådalen in 1931). Each country has its own profile rooted in history, and the national cases would be both interesting and useful for students and scholars to investigate. For this purpose, a qualitative historical approach could be applied, looking at news coverage of pivotal events, important political debates, and legislative development from an ideographic angle using newspaper articles, archival sources, and parliamentary proceedings as empirical data (for an example, see Dahlberg and Stevnsborg *forthcoming*).

Another approach could be to discuss different forms of civil-military cooperation from a social scientific perspective, taking one’s point of departure in models and theories. A useful model (Fig. 1), developed by Dr. David Last of the Canadian Royal Military College, explains the relationship between size of force and use of force. Low on the X- and Y-axes we find traditional policing using minimum force and typically being employed in small units, while military forces are placed at the



**Fig. 1** The relationship between magnitude of force applied (x-axis) and size of force typically used (y-axis). SWAT: Special Weapons and Tactics-units. SOF: Special Operations Forces. Borrowed from Dr. David Last of the Royal Military College of Canada



other extreme as they apply maximum force organized in larger entities such as companies or brigades to obtain their objectives. Special Weapons and Tactics (SWAT) teams lie between traditional policing and para-military organizations (e.g., gendarmeries or militia), while Special Operations Forces (SOF) overlap para-military and ordinary military forces as they typically operate in smaller groups and use special weapons and tactics, but distinguish themselves from police forces by the application of more violence. This model provides students and scholars with a basic framework for a nomothetic discussion of different types of institutions involved in domestic security.

Studies of how civilian and military forces cooperate at the operational level are also highly relevant. The response to the terrorist attacks on the concert hall Bataclan in Paris highlights one challenge. As related above, the soldiers rejected the police officers' request to help move into the concert hall, arguing that they were not authorized to do so (Schack 2016, p. 4). What happens when armed forces rooted in military planning regimes have to respond quickly to unforeseen incidents? Such studies could focus on different Rules of Engagement, operational concepts/doctrines, and competing forms of Command and Control structures but should also be concerned with differences in organizational cultures in a broader perspective.

As mentioned above, the average citizen of Western democracies trusts the armed forces. Civilian and democratic control of the armed forces seems like a fact of life and is rarely questioned or even debated. Scholars within the field civil-military relations – an interdisciplinary field spanning political science, law, sociology, and history and concerned with studying the role and power distribution between military and civilian authorities and organizations – would almost certainly regard this as misplaced complacency. They would emphasize the need to continuously pay attention to how the armed forces are controlled and what roles they perform (Foster 2016, p. 34; Feaver 1996; Owens 2010, p. 2). More research on the public perception of “soldiers in the streets” is needed, including broad quantitative surveys as well as smaller qualitative studies aimed at specific groups or individuals.

Tracing the concept of constabularization back to Janowitz (1960), one could also point to policing in international peacekeeping missions as a related topic for study. An early example of the use of military corps for policing was the United States Constabulary, a US Army military gendarmerie force tasked with upholding law and order in occupied Germany 1946–1952 after the collapse of the Third Reich (Kaufman 2017). During the Cold War, the idea of a superpower being able to apply less than maximum force appealed to Janowitz and his followers, and after the end of the bipolar era, this was exactly the task that Western armed forces were given. Peacebuilding and peacekeeping missions in the Balkans in the 1990s and Iraq and Afghanistan in the following decades became the core business of the United States and its allies. This novel focus on civil-military interaction and the comprehensive approaches required holds the potential for many relevant and interesting studies (Greener and Fish 2011).

A multitude of comparative studies within the field could also be carried out. One universal parameter is the legal requirements for call outs of armed forces across national borders, so studies of how militaries actually can and have been called out

for domestic security purposes in different countries are highly interesting and relevant. For example, when the Belgian government called out troops for Operation Vigilant Guardian after the 2016 terrorist attacks, the legal framework behind the decision was debated (Clearman 2018). And for comparison it is worth noting that while the Australian Defence Amendment has been updated several times since 2000 to allow the Commonwealth to use military forces in domestic security, the Constitution does not define “domestic violence,” which is a prerequisite for callouts, and it could very well be up to the High Court to test the legality of such (Sutton 2017).

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## Summary

Since the end of the Cold War, Western armed forces increasingly play a role in domestic security and in supporting national and local police forces. While majorities among politicians and publics appear to accept this trend as necessary and unproblematic, possibly connected to high levels of trust in the armed forces, analysts and scholars have engaged in lively debate over its drivers and desirability (source). As shown above, some scholars regard the increasing role of armed forces in domestic security as a logical development, reflecting new intractable, transnational threats, which cross the boundary between internal and external security, while critics claim that the values, mindsets, skills, tactics, and approaches of soldiers and police officers differ. They argue that the expanding domestic security roles of the armed forces risk undermining combat readiness and morale in the armed forces as well as civil liberties and, ultimately, civilian control of the military.

Currently, the empirical evidence is limited and mixed. The field would benefit from additional research.

An excellent metaphor for the entanglement of civil-military relations has been provided by Didier Bigo who described the unclear boundaries of security tasks as a “Möbius ribbon,” the intriguing topology of a two-sided band that has been cut, twisted, and reassembled so it in effect has only one surface and only one boundary. A small creature traveling across this structure will thus move through both domains without ever crossing the boundary between them. This represents vividly the delicate balance between civilian and military use of force in domestic security that students and scholars must navigate and investigate to increase our understanding of their role in society.

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## Cross-References

- ▶ [Civil Military Relations: What is the State of the Field?](#)
- ▶ [Civil-Military Relations?](#)
- ▶ [Military Training, Education and Socialization](#)

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# Reservists and Veterans: Viewed from Within and Without

James Griffith, Vince Connelly, Sergio Catignani, and Eva Johansson

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## Abstract

This chapter describes two important groups relative to military service – reservists and veterans. Definitions are provided regarding who is a member of each group. A summary of past and current research findings for each group is provided. The summary is organized by investigative topics or themes, which provide the current scope of the field for reservists and for veterans.

J. Griffith (✉)

National Center for Veterans Studies, University of Utah, Salt Lake, UT, USA

e-mail: [jhgriffith@comcast.net](mailto:jhgriffith@comcast.net)

V. Connelly

Psychology, Health and Professional Development, Oxford-Brookes University, Oxford, UK

e-mail: [vconnelly@brookes.ac.uk](mailto:vconnelly@brookes.ac.uk)

S. Catignani

Department of Politics, Exeter University, Exeter, UK

e-mail: [sergiocatignani@gmail.com](mailto:sergiocatignani@gmail.com)

E. Johansson

Department of Security, Strategy and Leadership, Swedish Defence University, Karlstad, Sweden

e-mail: [eva.johansson@fhs.se](mailto:eva.johansson@fhs.se)

Finally, approaches to the study of reservists and veterans are described, along with challenges – both substantively and methodologically – for future research studies. These serve as fertile areas for improvements and investigations in future research studies.

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**Keywords**

Military reservists · Military veterans · Deployment · Well-being and health · Family · Transition · Civic engagement

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## Introduction

Reservists and veterans are the subject of this chapter. Why are these two populations treated together, when by all appearances seem so disparate? Reservists and veterans are at times wholly integrated in the military – in the case of reservists, when activated and deployed, and in the case of veterans, during prior military service. However, when reservists serve in their /traditional part-time role and when veterans leave military service, they are less integrated in the military and resemble civilians, and consequently, they represent very unique military populations. Members of these populations, then, fall in between complete and partial immersion in the military, and as such, reservists and veterans can be studied as groups along the continuum of military institutionalization, compared and contrasted to full-time military servicemembers and civilians, informing aspects of the civilian-military gap (Karsten et al. 2002). Here, we present past and current topics of research interests for each population – some common to each population and others not. Investigative topics take into account perspectives of reservists and veterans themselves as well as those of the general public concerning these two populations, and hence, the chapter title – viewed *from within and without*. A summary of findings relative to these investigative topics offers background and direction for future research studies. Specifically, we offer considerations for content and methods of future studies of reservists and veterans.

## Defining Reservists

Broadly, reservists are defined as those who participate in the military part-time as opposed to full-time. (Those who serve full-time in the military are often referred to as “regulars” or “active duty” personnel.) The number of reservists in a country’s armed forces varies considerably from country to country, in addition to the proportion of the country’s total force. Where there is compulsory military service, nearly everyone in the population is a reservist, as is the case for Israel, Switzerland, and Finland. Sweden re-instituted conscription in 2018, due to difficulties in staffing on a voluntary basis. Every year about 4,000 men and women are called up for service, increasing up to 8,000 by 2024.

For countries having voluntary military service, the numbers of reservists are much lower, due to the fact fewer are needed to staff reserve units, as is the case for the United Kingdom (UK) and the United States of America (USA). In the USA military, reservists (800,000) comprise over half of the total military force (1.3 million) (Governing 2017). In the UK, there are approximately 35,000 active reservists; reservists make up some 25% of the force. In Canada, reservists make up 35% of the force (Ministry of Defence 2011). In Sweden, reservists make up 36% of the force (Armed Forces Annual Report 2019), including the Home Guard.

The frequency and duration of part-time military service differ among reservists, within countries and between countries. Some reservists, here called “active reservists,” join and incur obligatory periods of military service. For example, in the USA, recruits incur an eight-year obligation. Active reservists are usually assigned to specific units and attend training periods during weekends (usually one weekend a month), evenings, and concentrated periods of training (often up to two weeks annually). In the USA, these are called “traditional” or “Troop Program Unit” reservists. For a detailed discussion of the USA reserve force, see Federal Research Division (2019). Other reservists participate in the reserve force less regularly. Such reservists are required to complete a sequence of training specific to their military occupations and enlisted/officer progression. These reservists often do not have specific units of assignment and, therefore, are not required to attend regular monthly assemblies or annual training. Examples of such reservists are members of the USA military’s Individual Ready Reserve (IRR), Individual Mobilization Augmentation (IMA), and inactive reserves. Members of the UK ex-Regular Reservists are another example. These reservists have no specific requirements for military service. These personnel are full-time soldiers who have left the service but their contract requires military service only in rare cases of specific national emergencies (Connelly 2018). Similarly, reservists of the Finnish Army complete a period of full-time conscript service. They subsequently return to civilian life but remain members of the reserve force and can be called back in emergencies. In most countries, during threats to national security, higher headquarters may call reservists of any type to active duty – all together with members of the unit or individually and small groups in order to fully staff other reserve or active duty units (called “backfilling” or “cross-leveling”).

## Defining Veterans

In most countries, veterans are generally defined as those who have served in the military and have subsequently been discharged under favorable or honorable circumstances. Veterans include those who have served anywhere from as little as one day to many years. Veterans also include those who have served full-time and part-time as reservists. Veterans are often associated with specific period identity, for example, those who have served in combat areas are called “combat veterans” or specific to wars – veterans of World War II, Korean War, Vietnam War, or Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). In the UK, the

majority of the population tends to use the term veteran for those who have served in either of the World Wars (Burdett et al. 2012). Similarly, in Sweden, a distinction is made between those military personnel who have served either in-country or out-of-country (the latter, labeled as “mission abroad veteran”). The distinction is, among other things, due to the Swedish government decision in the 1990s to leave the traditional invasion-based defense in favor of a defense with greater emphasis on multinational missions abroad.

The number of veterans in the general population has much to do with how many have served in the military. Countries having compulsory military service have large proportions of the population who have served and as a result have many veterans. In contrast, countries having voluntary military service have fewer veterans, especially when the military is small relative to the general population. For example, the USA military has changed from compulsory military service to volunteer military service in 1973. This change reflects the number who have served and later become veterans. Among the 1930 birth cohorts, nearly half of the males in the USA was military veterans, contrasted to the Millennial cohorts (born 1981–1996), with about 4% of all males being military veterans (Pew Research Center 2019). The highest number of living USA veterans served in the Vietnam War (6.8 million), followed by the Gulf Wars (5.6 million, defined by 1990 to present), peacetime (4.3 million), Korean War (1.8 million), and World War II (930,000) (Parrott et al. 2019). In the UK, the Ministry of Defence (2019) estimates that in 2016 there were 2.5 million veterans. Since 2001, UK government policy officially recognizes any ex-servicemember as a veteran when the member has served for at least one day in the military and has drawn a day’s pay. Compared to other countries, this description is the most inclusive definition of a veteran, resulting in problems of providing effective support to such a large population of veterans (see Ashcroft 2014).

Veterans are disproportionately men, primarily due to few women participating in past major wars. More recently, women have been included in the militaries of many countries. In the USA, women veterans have increased seven-fold from World War II to present (Clever and Fisher 2017). Of the 22 million veterans in the USA in 2015, 2 million are women. Investigative topics of women veterans resemble those of men veterans (e.g., mental and physical health problems, health care access, and homelessness). There are, however, a few exceptions. Women veterans often face additional challenges when deployed – increased worries and concerns about family members’ care and greater likelihood of sexual harassment and assault (Clever and Fisher 2017).

The transition from military service to civilian life can be more difficult for women, mixing various roles of household provider and care provider to spouse and children in “unhealthy mix” (Disabled American Veterans 2014, p. 10). Just as civilian women but different from men, both veteran and nonveteran, women veterans face gender-specific health problems, including obstetrical and gynecological care, heart disease, and cancer.



## The Field of Study

We define the field of study for reservists and veterans by recurrent investigative topics of the research literature. In this section, a summary of findings relative to these investigative topics or themes is provided first, for reservists and second, for veterans.

### Reservists

Recent and current topics of investigation relate directly to the changed role of the reserve force. In the last decade, the reserve force in many countries has gone from a strategic force, largely static, to an operational force, largely dynamic. An historical overview of the reserve force after World War II provides an understanding of the current reserve force structure and prevailing investigative areas. After World War II, military forces of Western allies remained relatively large, though much of the force was re-allocated to the reserve force. Reservists acted as a deterrent to Soviet and Chinese aggression, called containment (Drew 1999). Reservists comprised a large pool of military personnel, serving part-time, and thus saved substantial costs compared to a large full-time force. When threats were discerned, reservists would be mobilized; this then would be an indication of serious defensive action, short of nuclear attack (Drew 1999). Such was the case in the Cuban missile crisis (1962) when the USA mobilized several thousands of reservists. However, this was the exception. This period, called the Cold War, spanned from 1945 to the fall of the Berlin Wall in 1991.

Costs associated with an active duty military force necessitated further down-sizing and moving units to the reserve force. For example, the USA Total Force policy (1980) reduced the size of the active military by moving units to the reserve force, in particular, combat support and combat service support units (Carafano 2005). For any large-scale military operation, reservists would have to be mobilized and deployed. This use described an “operational reserve” (Whitlock 2006). This change from strategic force to operational force characterizes the militaries of many Western countries. For example, in Sweden the 2015 Commission on the Manning System of the Military Workforces determined a reserve force of at least 23,000 members, double that of its size today. The changed role of the reserve force has made reserve military service more demanding, with more frequent and prolonged deployments. These events affected who would serve and how and the emergence of several areas of investigations.

**Reservists’ readiness.** Deployments meant reservists needed to be ready, individually and collectively. Reservists generally serve, in the USA case, 39 days a year. Reserve officers in Sweden serve, at the most, 1,095 days (3 years) during an 8-year period. Activities and amount of days are regulated by a servicemember’s plan, established on a yearly basis. Since reservists are part-time and have more limited training periods, reservists when activated often take time to get up to standards of individual and collective readiness as full-time military personnel. This is not

surprising, as observed in the first large-scale mobilization of USA reservists during Operation Desert Storm (ODS, 1990–1991). Approximately 230,000 USA Guard and Army Reserve personnel were mobilized for active duty military service. More than 100,000 were sent to the Persian Gulf, and the remainder served stateside to replace departing full-time military units (Nelson et al. 2001). Significant noted shortcomings were units having carried personnel on the rolls but who had not been attending monthly assemblies and units having personnel who were present in units yet had to be trained (e.g., attend basic training or advanced military occupational specialty training) or had not met physical fitness and medical requirements (e.g., overweight, unable to pass the Army Physical Fitness Test, had dental problems, etc.) (Orvis et al. 1996). Other inadequacies included shortcomings in individual job skills and combat preparation, utilization during weekend drills (having received task assignments), noncommissioned officer (NCO) and officer leadership, and collective training (General Accounting Office 1992). Such findings made readiness a major investigative focus.

Accomplishing readiness on a part-time basis (a weekend a month and two weeks annual training) is challenging. Readiness is often dependent on effective use of monthly drills and annual training, frequency of realistic training, and availability of modern equipment. These efforts compete with keeping costs of such activities lower than those of the full-time force, and thus, risk reserve readiness. Additional training periods are also frequently needed for leaders and key personnel. These preparations compete with reservists' families and civilian employment, making reserve military service increasingly challenging. On the positive side, reservists bring many civilian specialist skills, not available among those in the full-time military force. These skills are highly-valued, being novel and often needed in deployment, in addition to reinforcing occupational skills of military specialties (see Bury 2019).

**Reservists' health.** Well-being of reservists has been a past and continued investigative focus, particularly for those reservists deployed. Studies show that during deployment reserve and active duty soldiers generally do not differ in posttraumatic stress disorder (PTSD) and related symptoms (U.S. Department of Defense 2008). During postdeployment, deployed reservists report higher rates of posttraumatic stress disorder (PTSD) and related symptoms (1) when compared to deployed active duty personnel (Milliken et al. 2007; Schell and Marshall 2008); and (2) when examining differences between deployed and nondeployed personnel by component (Hotopf et al. 2006). Rates of PTSD and related symptoms (or changes in symptoms of cohorts across time, immediately after deployment and later) are greater for deployed reservists than for deployed active duty soldiers (Milliken et al. 2007), in particular, for those who report stress conditions right after deployment (Smith et al. 2008). Higher rates of PTSD and related symptoms among reservists appear later after returning from deployment, 3 to 6 months later (Milliken et al. 2007; Thomas et al. 2010), and up to four years later (Smith et al. 2008). These findings have spurred efforts to better screen reservists after deployment and during postdeployment (Griffith and Bryan 2017). Efforts also include methods to increase

better access to behavioral health care and methods to lessen stressful events associated with deployment for reservist and their families (e.g., predictable deployment schedules, reintegration programs, etc.).

**Reservists' families.** An area of investigation has been spouse and family attitude toward reservist's military service. USA studies show that extended training and deployment relate to negative attitudes of reservists' family members and employers (Grissmer et al. 1992; Kirby 2000). Such attitudes captured after the First Gulf War (1990–1991) related to reservists' less willingness to continue reserve military service (Griffith 1995). In the USA, during the height of the Iraq and Afghanistan wars, over a third of the ground combat forces was reserve military personnel. For many reservists, this was the first time of prolonged deployment (over 12 months), and for some, repeated deployments. These experiences are difficult adjustments for families and for servicemembers – evident from studies of deployment and postdeployment experiences (Griffith 2019). Indeed, UK reservists who judged the military support to their family as being poor when deployed were less inclined to remain in reserve military service (Dandeker et al. 2010).

A more recent focus has been specific aspects of family members' adaptation during deployment. Reservists and their families make extraordinary adjustments during deployments, such as having significant changed roles in the family affecting household management (MacDermid 2006) and parenting children (Rentz et al. 2007) and having to make difficult income adjustments (Kline et al. 2010). These adjustments relate to reservists' deployment stress. Studies examining stress symptoms among reservists point to unique deployment stress, such as worries about spouse, children, household chores, finances, etc. (Castaneda et al. 2009; Erbes et al. 2008). The Swedish military, in particular, has pursued a line of research (Olsson and Olsson 2019; Weibull 2009), called “dialogical participation action research” (DPAR), aimed to develop methods for servicemembers and their family to cope with stressors, especially those associated with international deployments.

**Reservists' civilian employment.** Civilian employment is the primary livelihood of reservists and presents another unique aspect of reserve military duty. Civilian employment of reservists is most affected by deployments, often involving prolonged periods of active military service and absence from civilian work. After deployment, reservists have to re-establish relationships with their civilian employers and work, unlike active duty personnel. Civilian employers are not always understanding of reservists' military activities. While there are numerous examples of this being done without problems, there are also examples where reservists have been given lesser jobs, laid-off, etc., even when contrary to national law (Castaneda et al. 2009), causing reservists additional worries. Some countries (e.g., USA) guarantee the same or similar jobs to reservists before having been deployed. Re-employment and prevalence of postwar adjustment problems (Griffith 2010), including suicide (Griffith 2012), has brought greater attention to financial hardships of reservists who are deployed, such as pay equity while deployed and subsequent re-employment after returning. Re-employment inequities observed among USA reservists have resulted in several initiatives to provide more certainty to reserve deployments and support for reservists, their families, and civilian

employers (e.g., Army Force Generation policy for deployment predictability (Whitlock 2006), The Yellow Ribbon Reintegration Program (U.S. Department of Defense 2008) for Family Support Groups (FSG), and Employer Support of the Guard and Reserve (ESGR) programs.

**Reservists' recruitment.** The changed role of the reserves, from a strategic role to an operational role, has occurred in many countries, in particular, in the context of a volunteer force. This meant that the reserves had to recruit sufficient personnel to staff units. And as already noted, reserve military service has become increasingly demanding. For many countries, staffing reserve units has been problematic, especially for military specialties (e.g., medicine, engineering). In addition, prevailing negative views of reserve military service in the wider community hurt staffing of reserve units (Connelly 2019). These problems have given rise to studies of how to recruit reservists.

To meet personnel staffing requirements, countries have developed marketing plans that included incentives, such as bonus money, educational benefits, job training, etc. For example, when the USA first started voluntary military service (1973), recruiting for the reserves was difficult (Schmitz 1990). With the rising costs of college tuition and increased emphasis on college attendance in the 1970s and 1980s, offering educational assistance was an effective strategy to recruit. College-bound youth then became the primary market for the USA Army Reserve (Schmitz 1990). These recruits, along with many others, join the Army Reserve for extra pay and job skill training (Griffith and Perry 1993). However, such recruits often leave military service when mobilized and deployed, as the case during Operation Desert Storm (Griffith and Perry 1993). In addition, recruits who join for primarily tangible benefits (e.g., bonus money, educational benefits, and job training) are frequently less willing to report for mobilization and to stay in military service (Griffith 2008). During more recent wars in Iraq and Afghanistan, the USA had great difficulty in staffing units, often stopping soldiers from leaving after the end of obligatory service, offering large bonus money for joining or staying in military service, and allowing medical, moral, and mental waivers for new entrants (Gallaway et al. 2013). Western militaries relying on volunteers report similar experiences. The Sweden's Defence Policy (2016–2020) stressed the importance of reserve officer recruitment to achieve warfighting needs of units. Initial training of tactical reserve officers is conducted through in-house training and education for those who already have or will acquire a civilian academic degree. While these efforts have been somewhat successful, studies suggest that such recruits often have lower levels of commitment – less willing to report for mobilization and less likely to remain in reserve military service beyond initial commitments (Griffith 2008).

**Reservists' identities.** Traditionally, reserve military service involves intermittent contact with the military, unlike active duty military service. When activated and deployed, reservists leave their families and civilian work and return once deployment ends. Describing the way in which the reservist relates to these aspects of military service, called identity, has been a topic of investigation. Depictions often center on conflicting demands between military service and civilian life. One of the earliest descriptions of the reservist is Ben-Ari's (1989) metaphor of "masking."

This term describes how a reservist, largely a civilian, comes to terms with conflicting demands of military service. Lomsky-Feder et al. (2008) describe reservists as “transmigrants.” This label characterizes the numerous transitions required of reservists – most often a part-time endeavor complicated by civilian employment and family, but also full-time having to mobilize and be deployed, and transition back to part-time military service. Vest (2012) describes three processes whereby the reservist incorporates experiences (i.e., multiple belongings and possible identities) into sense of unity of self-identity. Use of these processes is different between deployed and nondeployed reservists and have implications for postdeployment adaptation. For example, deployed USA Guard identified more strongly with military service with greater internalization, in particular, deployment experiences. Griffith (2011a) proposes several identities most characteristic at different time periods in the USA military – 1945 to present. Each identity corresponds to a set of expectations for reserve military service. Some identities are congruent with the demands of reserve military service (e.g., in modern times, “soldier warrior,” versus in less modern times, “weekend warrior”) and thus are more likely than others to better meet current and emerging demands and to cope with deployment stressors. These approaches are useful in understanding the processes individual-level mechanisms and adaptations when activated and deployed (Griffith 2011a). Identity can also be influential in mental health vulnerability in both military and civilian life through engendering a stronger sense of agency among reservists who then can more successfully negotiate demands of military service and civilian life. Identities are also useful in determining those applicants most suited for modern reserve military service – most willing to serve especially when mobilized and deployed (Griffith 2011b).

## Veterans

As reservists above, we define the field of study for veterans by recurrent investigative topics found in the research literature. This section provides a summary of findings relative to these investigative topics or themes. An excellent and very recent source for veterans’ issues and studies is the two volume book, *The civilian lives of U.S. veterans: Issues and identities* (Hicks et al. 2017).

**General health.** A major topic of interest for military veterans has been their general health after leaving the military, particularly those who served in combat areas. This concern stems from veterans being disproportionally overrepresented in psychological and substance abuse disorders relative to the general population (Substance Abuse and Mental Health Services Administration 2019). Between 4% and 17% of USA veterans have been diagnosed with PTSD (Richardson et al. 2010). Veterans also have twice the mortality rate for accidental drug overdose compared to the rate in the general USA population (Bohnert et al. 2011). In recent years, USA military veterans account for about a third of all suicides in the general population (Jaffe 2013).

Such findings are not entirely consistent across countries. Fear et al. (2010) observed few enduring psychological challenges among UK military personnel after return from deployments. While there has been some growth in numbers of UK military personnel displaying mental health difficulties postmilitary service overall, the percentages remain small compared to the USA (Stevellink et al. 2018). Swedish veterans who were deployed do relatively well, both psychologically and physically during postdeployment (Larsson et al. 2018a, b; Michel 2005). A cohort study (Pethrus et al. 2017) showed, for example, that Swedish military veterans do not differ from nondeployed risk for suicide or mortality. Other studies have shown veterans in Sweden generally do better compared to nonveterans in the general population (Larsson et al. 2018a, b). A more recent line of Swedish veteran studies has focused on the accumulated effects of daily hassles. Such hassles have shown stronger relationships with physical and psychological symptoms than major stressful episodes or chronic stressors, in addition to the potentially buffering effects of daily uplifts on personal distress (Larsson et al. 2016). Even so, public perceptions, some accurate and others not, have contributed to the view that many veterans, in particular in the UK and the USA, suffer from problems (Ashcroft 2014). The media often report the incidence of mental health issues among veterans, which are misleading. For example, suicide rates postconflict are often compared with rates of combat deaths, adding to stereotypical beliefs about adjustment among all veterans (Connelly and Burgess 2013).

**Transition from military service to civilian life.** Some researchers relate negative health outcomes of veterans to the difficulties of transitioning from military service to civilian life, often requiring significant adjustment (Romantuk and Kidd 2018). Several studies report military veterans having some form of reintegration difficulty (Griffith 2015; Sayer et al. 2010). These include having poor family relationships (Karstoft et al. 2015), being unemployed (Sayer et al. 2010), having troubled finances (Pew Research Center 2011), being of poor physical and psychological health (MacLean et al. 2014), and being homeless (Tsai et al. 2016).

Changed identity associated with military life and then civilian life might explain some of these negative life outcomes for veterans (Romantuk and Kidd 2018). The military is a closed or “total institution” (Goffman 1961), having a defined structure and hierarchy reinforced by explicit procedures and an implicit culture. The military organization provides members with purpose, individually and collectively, and through its team-oriented culture, members shared social bonds or comradery. When discharged, military veterans often describe a loss of purpose and meaning in what they do (Ahern et al. 2015; Kulka et al. 2015). This loss has been related to poor preparation for transition out of the military (Kulka et al. 2015; Walker 2012). Veterans experience civilian life as less structured, less purposeful, and less communal, often associated with emotional distress (Burkhart and Hogan 2015). Those who have left military service early or prematurely are especially more at-risk for health and adjustment problems than those who serve a full career (Cooper et al. 2018). Several other factors likely contribute to poor adjustment among veterans, including preservice factors such as childhood adversity (Murphy and Turgoose 2019), planned versus unplanned departures (Spiegel and Shultz 2003), postservice

civilian work and family experiences (Taylor et al. 2007), and social networks which no longer serve effectively (Hatch et al. 2013). Postservice identity has been associated with later personal adjustment, in particular, veterans who served in combat (Smith and True 2014). Aldwin et al. (1994), for example, reported that World War II and Korean War veterans who view their military experiences positively and as having desired effects (e.g., teaching them to cooperate, cope with adversity) express fewer posttraumatic stress symptoms than those who do not see military experiences as having positive effects.

**Homelessness.** A persistent topic for veterans has been over-representation among the homeless. According to estimates, about 11% of the homeless in the USA are veterans (Department of Housing and Development and Department of Veterans Affairs 2014). Homeless veterans are concentrated predominately in major urban areas, such as Los Angeles or New York City. Homeless veterans, when compared to nonveterans, tend to be male, older in age, and being high school graduates (Tsai et al. 2012). Homeless veterans also are more likely to be white and having a disability than nonveterans (Department of Housing and Development Urban Development 2010). Difficulties in adjusting to civilian life after military service may be one reason for veteran homelessness (Carillo et al. 2012), in addition to higher unemployment (Wood 2014) and greater prevalence of psychological conditions, especially among recent veterans (Tanielian and Jaycox 2008). However, reliable data on homeless veterans has been difficult to obtain, and some researchers dispute the prevailing assumption that more veterans than expected are homeless (Jones et al. 2014).

**Veteran employment.** Due to training and experiences, veterans often have been sought after for employment. Veterans already have job experience and tend to be older and more mature. Moreover, military occupations are often transferrable to civilian occupations saving time in training, for example, medics, mechanics, communications, etc. Veterans have demonstrable training and work performance in the form of standardized evaluations. Indeed, veterans perform at higher levels, have lower turnover rates after the first job, and advance more rapidly in Federal civil service organizations (Pollak et al. 2019). They, too, are desired because of their experiences as having followed protocols and direction by supervisors and having supervised others. Veterans having experienced organizational life are accustomed to organizational protocol and loyalty and have experiences with leadership and teamwork and the difference these areas make in a work setting.

**Civic engagement.** A recurrent research interest has been civic involvement of veterans. Studies show veterans, compared to nonveterans, participate more in community affairs and volunteer for community improvement. Some speculate veterans are more motivated by concern for the public good or humanity as a whole and consequently more involved in civic activities than nonveterans (see Griffith 2020). This argument goes back as far as the classic *American Soldier* studies. Here, Stouffer et al. (1949) documented the deep civic engagement of World War II veterans after returning home, contending that military service made veterans more concerned about others. Indeed, several studies present evidence of



greater civic involvement among military veterans (Nesbit and Reingold 2011; Teigen 2006; Wilson and Ruger 2008).

**Veteran identity.** Another topic of investigative focus has been how veterans see themselves and how society sees them. Many veterans see themselves as being patriotic – having responded to a “call to duty” and served the country. Indeed, the primary reason enlistees report that they participated in the military was “to serve my country” (Helmus et al. 2018). Veterans usually take much pride in having served and having supported basic values of the society through military service (Helmus et al. 2018). Ironically, some ex-military servicemembers view themselves as no different from others, as evident from Burdett et al.’s (2012) study of UK veterans. To gather information, the researchers gathered responses of some 200 UK armed forces personnel by way of a structured telephone interview survey. Only half of those ex-service personnel surveyed described themselves as veterans, perhaps reflecting a disparity in what is a veteran between the UK government’s official definition and that of the veteran community. Burdett et al. (2012) report that “neither older, nor longer-serving veterans nor those who had deployed or seen combat were significantly more likely to self-identify as veterans, suggesting that definitions based around historical deployments are less influential among veterans” (p. 754).

What are society’s views of veterans? Military veterans, often having made sacrifices during wars, are generally respected and treated with deference by members of society. This treatment varies from country to country. In the UK and USA, veterans are honored on Remembrance Day and Veterans Day, respectively. Treatment is often particular to the wars in which veterans participated. For example, in the USA, Vietnam War veterans were often degraded – booed, spat on, etc., whereas veterans of the recent OIF and OEF were praised and admired. The UK has a rich historical tradition of relying on regimental and corps associations as well as veterans charities to provide support to veterans, for example, the well-established Soldiers, Sailors, Airmen and Families Association (founded in 1885), Combat Stress (founded in 1919 and originally named the Ex-Servicemen’s Welfare Society), the Royal British Legion (founded in 1921). Many veterans doubt civilians can understand their military experiences (Ahern et al. 2015). Indeed, military veterans often have reported problems forming and maintaining relationships with civilians following discharge (Olsen et al. 2014). While civilians desire to express gratitude for their service by sayings, “Thank you for your service,” many veterans view this phrase as superficial and ingratiating toward veterans (Horton 2013). Detached from veterans’ experiences, in particular, trauma experienced by combat veterans, veterans consider these comments as disingenuous.

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## How to Study Reservists and Veterans

This section describes directions and major challenges for future research when studying reservists and veterans. First, we provide a summary of the topic areas or themes of reservist and veteran studies, identifying commonalities and gaps. These provide direction for content of future studies on these populations. Next, we then



describe methodological approaches to studying reservists and veterans, emphasizing past and current challenges. These are useful considerations for future studies.

## Substantive Scope of the Field

Table 1 displays a summary of investigative topic areas or themes for reservists and veterans.

Noteworthy is that investigative topics for reservists centers on *within-service* experiences, such as deployment and contemporary demands of reserve military service, and how these experiences impact reservists' readiness, retention, and recruitment; family life; and health. In contrast, the investigative focus for veterans centers on how *within-service* experiences, especially combat exposure, impact later life, examining aspects of transitions from military life to civilian employment, family, and later health. Even so, many of the topic areas overlap for reservists and veterans, specifically health and transition issues. For both groups, much of the current research focuses largely on trauma experienced during recent wars. For many countries, the conflicts in Iraq and Afghanistan resulted in the largest deployments of reservists since World War II. For reservists, health has been examined after having returned from deployment. By comparison, health of veterans has been examined

**Table 1** Summary of investigative topic areas or themes for reservists and veterans

Topic area/ theme	Reservists	Veterans
Readiness	X – related to changed role of reserve force and the organizational dynamics of a total force	Not applicable
Well-being/ Health	X – deployment adjustments and postdeployment	X – most interest in long after departing military service and in-service and preservice predictors of well-being/health
Family	X – related deployment adjustment, postdeployment reintegration and the day-to-day negotiations of part-time reserve service	X – related to dealing with poor well-being/health of veteran in the family
Civilian employment	X – relative to resuming civilian employment after deployment and the day-to-day negotiation of part time reserve service	X – relative to obtaining civilian employment after having served full-time in military
Civic engagement		X – voting, participation in political causes, community service
Recruitment	X – related to why people volunteer to be a reserve	Not applicable
Identity	X – related to change role of reserve force; identities compatible with new demands and potential identity clashes with full-time military service	X – readjusting identity of military member to civilian

much later after they leave military service and often in relation to other veteran concerns, such as homelessness, unemployment, and suicide.

Transition from full-time military service has been an interest for both reservists and veterans. For veterans, the transition interest has usually been after several years of active duty, perhaps 1–2 enlistments, when they left full-time military service and enter civilian life. Reserve transition issues pertain mainly to returning to part-time military service and having to resume their familial role and civilian job. For reservists, these latter aspects may either ease or worsen transition. In terms of ease, previous roles provide a ready way to resume civilian life. In terms of hindrance, past roles may have changed for the reservist due to time spent away, deployment experiences, etc., and the reservist is unable to perform roles as he/she had once performed. Veterans, after spending years in the military, leave the military culture and the identity it provided. This process is unlike reservists, who have been deployed and then return to military service part-time still having some identity associated with military service.

Identity as a topic pertains to both reservists and veterans. The interest for reservists is an identity which is optimally compatible with the demands of military service. For veterans, the interest is having had an identity that no longer has a military context, once having left the military. Several studies relate this loss to transition problems.

Topics of recruitment, retention, and readiness have largely been interests for reservists, due to their current military service, and more recently, national defense's increased reliance on reservists. Civic engagement has been largely a topic of veterans, comparing veterans to nonveterans in voting and community involvement. It is likely that factors associated with civic engagement among veterans operate similarly among reservists. Both groups serve voluntarily for the benefit of others. Characteristics of people making them especially suited for employment has been largely studied among veterans. Since both groups served in the military, it likely that reservists would have similar desirous characteristics for employment. Civic engagement and advantages of hiring servicemembers might be topics for future research for reservists, making comparisons to findings found for veterans.

## Methodological Approaches and Challenges

### Studying Reservists

Major challenges to research on reservists are: human subjects review approval; gaining access to units; and getting unit members to participate in studies. The first hurdle is *getting permission* to access reservists for data collection. Access involves gaining the necessary permissions from the military, usually through the military ethical and review boards, commonly called Institutional Review Boards (IRBs). These boards consider medical and other potentially controversial research topics, often requiring detailed and lengthy review between one to six months not including the extremely time-consuming preparatory study application (Roberts 2016). Once approved, research staff must *gain access* to reservists. Most research studies

involve gathering data from individual servicemembers. Considerable effort must be devoted to developing good relations with commanders of units in which reservists reside. Due to part-time military service, reservists' time is limited; commanders often choose training over other activities, such as research.

While all members of a unit may be considered for data collection, usually some form of sampling is used (see Griffith 2014). Many reserve units are spread geographically, making coordination, access, and travel difficult. This is why sampling based on clustering (or cluster sampling) is efficient. Reservists are clustered by unit, so frequently researchers randomly select units, and within units, select individual reservists. Careful thought about the population of interest dictates more specific targeting of reserve units and unit members for participation, for example, readiness of combat arms units, satisfaction of junior-ranking enlisted reservists, retention intentions of mid-level officers' retention intentions, etc. Once reserve units are identified for the study, several other factors come into play, crucial to the representativeness of the study findings. Once in the unit, reservists are available only at certain times in units, often weekends and evenings. Not all reservists in the unit necessarily attend the same training event. Thus, researchers must be flexible; repeat visits may be necessary.

Representativeness of study findings is a recurrent issue, in particular, for audiences receiving study results. For example, military leaders and policymakers are often skeptical of studies of small sample sizes, having little or no demonstrable representativeness indicators (e.g., comparing demographic characteristics of members in the sample to those of the population). Similar to most research on institutions, those most likely to agree to take part in research tend to be older, male, and of higher rank. Thus, there is a risk of *response bias* from the respondents with reserve officers and senior sergeants proportionately more likely to respond to participation than those in lower ranks. This can be mitigated after data collection through statistical weighting by rank and other factors such as practiced in the large-scale UK annual reservist survey (U.K. Defence Statistics 2019a). A more direct and simple way to address concerns about representativeness is comparison of demographic characteristics of the sample to those of the population. Often population demographic data are not very accessible and require some negotiation to achieve. This can be due to a combination of unreliable record keeping for reservists, data access restrictions, and national security requirements.

Data collection pertains to *what kind of data* is gathered and by *what method*. Kind of data refers to *quantitative* or *qualitative* data. Qualitative data are responses obtained from less structured questions and response categories than quantitative data. Qualitative data are often obtained from in-depth interviewing. Such interviews start with a few broad questions (e.g., recount the sequence of deployment experiences) and then followed up by more detailed questions (e.g., detail specific events of deployment). Responses are recorded verbatim with a few interpretative notes. Quantitative data are responses provided to the same question with defined response categories, for example, "Do you intend to re-enlist?," "No," "Maybe," or "Yes." *What kind of method* refers to how information from reservists is obtained, for

example, through survey questionnaires administered in-person, by mail, or by Internet. Personal interviews and observations are also ways to gather data from reservists, usually yielding qualitative data. The method of data collection has much to do with optimizing participation as well as the content of information to be obtained – whether in-depth interviews which are more suited to personal open-ended questions; or whether population estimates on specific issues which are more suited to large-scale closed ended questionnaires.

A popular method for obtaining quantitative data from reservists is the survey. The amount of effort to develop the content (both questions and close-ended responses) for topics should not be underestimated (see Griffith 2014). Researchers can expect to spend considerable time developing questions – reviewing past questionnaires for appropriate content, performing literature reviews of the topics being investigated, and conducting individual or group interviews to explore content. Surveys are often quick to administer and can be completed in a variety of locations including the barracks, in the field, and solitary settings using the Internet or responding to questions on the telephone. More recently, online surveys have been very popular. Online surveys potentially offer more access to reservists and, thus, higher levels of participation. Online surveys do not require material copies, travel to units, and scheduling specific times. However, response rates for survey questionnaires, especially those online or not having direct supervision during administration are quite low. For example, the UK's Ministry of Defence annual attitude survey achieves about 40% completion rate for full-time personnel and 30% completion rate for reservists (U.K. Defence Statistics 2019b, c).

Methods that yield *qualitative data* have become more prevalent in recent years for studying reservists. Such methods typically use open-ended questions, broad in scope. Reservists' responses are then followed up by more specific questions pertinent to the study aims. Researchers summarize responses as recurrent themes, called thematic analysis (Braun and Clarke 2006). Thematic analysis is used in qualitative research and is especially suited for understanding events experienced by study participants. Focusing on themes or patterns of meaning in the data, it "reports experiences, meanings and the reality of participants, or it can be a constructionist method, which examines the ways in which events, realities, meanings, experiences and so on are the effects of a range of discourses operating within society" (Braun and Clarke 2006, p. 81). Qualitative data are particularly valuable for an under-researched topics and groups, such as reservists, where little is known or understood about the social phenomenon or group under investigation, or where the topic of investigation covers sensitive or complex issues, such as reintegration of reservists' family members (Future Reserves Research Programme 2018). Detailed knowledge of reservist policies and practices is very useful for interpreting data generated accurately.

Unlike quantitative data, qualitative data do not seek statistical representation of a population. Qualitative data rely on purposive sampling to reach "saturation." This refers to the point where no new themes are being generated in the data collected, suggesting that the range of everyday experiences has been captured and generally requires much smaller samples than methods of quantitative data. Of note, however, is that policymakers are sometimes skeptical of qualitative data due to

limited sampling. The challenge for researchers is to demonstrate the utility of interpretations relying on qualitative data for more general policy or decision making. Recent approaches to synthesizing and presenting qualitative data can be useful in overcoming some of these issues (see Lewin et al. 2018).

As noted in the summary of studies, families and employers of reservists have been a focus of research. A number of studies have investigated reserve families and employers with varying degrees of success over the years for these reasons, though they remain under-studied aspects of reserve military service (Gribble et al. 2020). More recently, interest in families and civilian work has increased. This interest is due to reserve military service increasingly exacting costs from the families or civilian work, and both families and employers are heavily impacted by reservists' time away on deployments. Families or civilian work can also be barriers to retention for reservists. Gaining access to reservists' families is difficult often even more than access to fulltime servicemembers' families. Reserve family members and employers are often not listed in any formal database, so the source comes directly from reservists. If such information exists, it is usually not complete or unreliably recorded. Other factors make families and employers difficult to access. Both are geographically dispersed; members of each often do not visit military facilities, if at all. Unlike fulltime servicemembers, reserve family members do not necessarily identify as a military family but may think of themselves instead as having a member of the family in the military (Connelly et al. 2017). As such, reservist family members are much less integrated and tend to feel quite distant from the military. As a result, calls to take part in military-oriented research may not seem relevant to them.

Recruitment of reservist families via the Internet may prove a more successful access tactic for some projects. However, reservists' family members who do take part in Internet-based research often have particular reasons for involvement, including attempts to convince the researchers to advocate with the military on their behalf over personal issues. When reservists have been deployed to an operational theatre and return home after a considerable period, the family usually needs time for readjustments. And while this period can be of great interest to the researcher, reminders of the recent deployment in the form of a research project may need particular sensitivity on the part of the researcher to ensure family participation.

Access to civilian employers of reservists is also fraught with difficulty, as well. Reservists frequently are anxious about highlighting their reserve military service to an employer, being apprehensive about time away from civilian work being seen negatively (Cunningham-Burley et al. 2018). While this perception may not be justified, researchers need to be very careful in their approach. One approach has been contacting employers directly for opinions on reserve military service more generally. However, many employers have very little knowledge of reserve military service, given the wide distribution of reservists in employment. Often such broad-based requests from employers by researchers often end up on the desk of their only reservist.

## Studying Veterans

Approaches and challenges to research on reservists generally apply to research on veterans. Approaches to performing research on reservists, specifically, review, access, and participation, are similar to performing research on veterans. There is, however, some degree of variance. Unlike reservists, veterans usually are not organized as structured groups. As a result, review boards (IRBs) or convenient ways to obtain study participants are not readily available. For instance, even if veterans participate in organized ways (e.g., motorcycle enthusiasts; Moelker 2014), there is unlikely an IRB for such groups. Even so, in these cases, it is advisable to have some IRB review and approve the research plan. Also, organizations to which the researchers belong may require such reviews, for example, the American Psychological Association for psychological research. Some countries do have lists of veterans, albeit access is limited and requires extensive justification and review at various levels in the government. Too, such lists may have dated information on veterans, veterans who left military service many years ago. In the absence of such lists and formal organizations of veterans, access to veterans and subsequently their recruitment for study participation is difficult.

One approach to developing groupings of veterans is to identify groups in which veterans cluster, such as American Legion, Veterans of Foreign Wars, Elks Club, etc. Researchers will have to persuade organizational leaders of study merits in order to gain support of the proposed study by announcements to members and perhaps even by providing a list of members. Researchers then can develop a plan for sampling members. Veteran welfare organizations and charities can provide links into the veteran community. However, these organizations often serve veterans who are in need of help, and this can bias those participating in the study and study findings. A call for veterans to engage in research (e.g., newspaper ads, radio and television announcements, etc.) also risks over-representation of veterans who are advocates for their cases against the military. Finally, without a military context to legitimate and to support the study, trust in studies of veterans is paramount, especially for those veterans who had negative experiences in the military (Kilshaw 2006). Researchers would then have to devise methods to gain trust of potential study participants (see Moelker 2014).

Approaches and challenges to data collection concerning the *kind of data* gathered and the *method of data collection* for veterans are similar to those for reservists. The research literature has many examples of research on veterans, which provide successful methods of access, sampling, and recruitment, in addition to data collection methods and measures. An early example is the Veterans Affairs Normative Aging Study (NAS) from 1963 to 2014. This study followed 2000 or so male veterans of WWII and Korea (Mroczek and Spiro 2005). More recently, the USA initiated the Millennium Cohort Study in 2001 shortly before the Iraq and Afghanistan wars and thereafter (Smith et al. 2008). Military personnel reported on their new onset and persistent symptoms of PTSD after deployment in addition to their combat exposure. In 2003, the UK started a study of similar design, called the Kings College London Military Cohort study (Hotopf et al. 2006). These studies have proved very useful in establishing baseline data on veterans' mental health and

other important indicators over time. Investigators are able to track changes and examine predictors of outcomes of interest before the veteran leaves military service. A particular note is that researchers devising future studies can often inquire about gaining access to these studies' documentation (e.g., sampling design, data collection methods, measures, etc.) and actual data for their own research questions. These resources can be enormously useful and time-saving.

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## Summary

This chapter offers a snapshot of reservists and veterans – who they are, what have been research topics and findings, and considerations when investigating members of the two groups. Past and current investigative topics and findings offer topics for future research, in addition to methodological approaches and challenges.

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## Cross-References

- ▶ [Civil-Military Relations?](#)
- ▶ [Civil Military Relations: What is the State of the Field?](#)
- ▶ [Dynamic Intersection of Military and Society](#)
- ▶ [Military Personnel](#)
- ▶ [Strategy and Doctrine](#)

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### Veterans: U.S. Cohort Descriptions; Issues of Transition, Families, Employment, Health, and Homelessness; Civic Engagement

- Hicks, L., Weiss, E. L., & Coll, J. E. (Eds.). (2017). *The civilian lives of U.S. veterans: Issues and identities* (Vol. 1, 2). Santa Barbara: Praeger.

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# Military Families: Topography of a Field

Sofia K. Ledberg and Chiara Ruffa

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## Abstract

Over the past decades, debates revolving around the role and challenges of military families have developed into an important subfield in military sociology. Throughout history, military families have played an important role for military forces, and in the post-World War II era, the role of the family has shifted as a consequence of military professionalization. Research on military families explores the different demands placed upon service members from both the military organization and the family. More recently, such research has studied how the inclusion of women and gender minorities, operational deployments, and

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S. K. Ledberg  
Swedish Defence University, Stockholm, Sweden  
e-mail: [Sofia.Ledberg@fhs.se](mailto:Sofia.Ledberg@fhs.se)

C. Ruffa (✉)  
Swedish Defence University, Stockholm, Sweden  
Uppsala University, Uppsala, Sweden  
e-mail: [Chiara.ruffa@fhs.se](mailto:Chiara.ruffa@fhs.se); [chiara.ruffa@pcr.uu.se](mailto:chiara.ruffa@pcr.uu.se)

broader societal changes transformed the composition, stakes, and challenges of military families and the traditional idea of the military spouse.

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**Keywords**

Military spouses · Greedy institutions · Family stressors · Social support

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## Introduction

Over the past 30 years, discourse surrounding military families has become a core concern of military sociology. The literature on the military family begins with the assumption that the military profession is a special job because of its special function and its demands on time and other commitments. Further, the military demands that its members strip away some of their previously existing identity to become part of an organization where collective culture matters more than the individual or where collective culture drowned out an individualistic culture (Winslow 1997). Against this backdrop, where does a service member's family fit – is it a support mechanism, a hindrance, or both?

Importantly, these questions began to be considered in the mid-1980s by Mady Segal. She introduced the concept of a “greedy institution,” which equated military families to military organizations because both put demands on their “members” and both fit the definition of a “greedy institution” (Segal 1986). Mady Segal's work was groundbreaking: with the transition from a conscript US military to an All-Volunteer Force (AVF), more and more enlisted personnel had families. During conscription, young conscripts generally started families after they returned to the civilian sector. The AVF involved longer tours of duty and a higher likelihood of reenlistment. Families became a new norm (De Angelis et al. 2018).

With frequent deployments abroad and within-country relocations, wives of service members and women service members found themselves overtaxed, and the notion of the greedy institution helped to explain why. They faced demands from two greedy institutions – the family and the military. In the model she developed, Segal identified four components of military membership likely to create friction with family life, namely: “(1) risk of service member injury or death, (2) frequent relocations, (3) periodic separations, and (4) foreign residence” (Segal 1986). This model suggested an unavoidable tension between two greedy institutions. Because her model is context and time specific, its application is limited, particularly with reference to Europe. Nevertheless, the greedy institution model has profoundly influenced the debate within the field and has served a reference point for all the literature on the topic (Heinecken and Wilén 2019; Button and Diallo 2020; Van Slyke and Armstrong 2019). Drawing on Segal's work as well as reflecting on further societal development and contextual specificities, the literature has focused on the stress relating to military organization and family, the role of deployments, psychological effects, changes reflecting broader societal transformations, and support roles.



This chapter begins with an overview of classical texts focusing on the, at times, incompatible demands placed on service members by the military and the family. It thereafter introduces key issues within the more recent literature, including the various sources of military family stress, including operational deployment, the impact of societal changes on the military family, and the social support role that military families play. The chapter concludes with a number of avenues for future research.

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## The Roots of the Greedy Institution

The most widespread idea within the research field of military families is that service members and their families must navigate the demands of two greedy institutions: the armed forces and the family (Segal 1986, 1989; Segal and Jesse 1993; Segal et al. 1992; Moelker et al. 2015, 2019). The underlying idea put forward by Segal is that greedy institutions “compete for the commitment, loyalty, time and energy of their members” (Segal 1986, 9). Her model suggests an unavoidable tension between those two greedy institutions.

The literature on the military family was primarily about the US case initially mostly because there were more stresses on the US force compared to Europe. Under a draft system, the enlisted force was young and had short service obligation and hence was generally not married and did not have children. The introduction of the All-Volunteer Force changed the demographics and tenure of the enlisted force for the USA. The draft ended in 1973, and by the mid-1980s, the effects of eliminating conscription had filtered through the institution. Women also entered the military at much greater rates partly because the military could not recruit enough men. Both had implications for the tension between family and military facing service members.

To make the tension more extreme, in the 1980s, military families struggled with the USA’s continental geography, which often separated nuclear from extended families. The individualist culture and limited social services exaggerated the hardships. There were few safety nets or buffers that could partly temper the greediness of either the military or family. In that new context, the military family certainly was to a large extent integrated in the military community, and there were no real boundaries between the (usually male) officer’s military and (usually his) private life. For example, US servicemen generally lived in military installations together with their families (Segal 1986: 23), especially in the “Little Americas” that were created in Germany and other places during the Cold War (Baker 2004). At that point in time, the military also influenced the family of servicemen to a great extent. Stanley and coauthors wrote that “the relationship between the Army and army families will never achieve parity. By the very nature of its responsibilities, the Army must maintain control and occupy the dominant role” (Stanley et al. 1990).

Service members stayed longer in the armed forces and were, consequently, more likely to marry and raise children while serving (Segal and Segal 2006). As a consequence, instead of being pressured by only one greedy institution, i.e., the

military, the officer now came to face an additional set of demands from the family, which according to Segal share several traits of a greedy institution (1986). Thus in 1986, the problems with military families began to surface, and the greedy institution model was helpful to navigate this new time and context.

Even though the greedy institution model has generally been the lenses to view possible tensions between military and family felt by service members, contemporary scholars note that the greediness of the military institution specifically varies over time and place (Moelker et al. 2015; De Angelis and Segal 2015). Until the mid-1990s, the model really was not relevant in Europe because they used a conscription model, the draftee obligation was short, and the international missions were few.

The European literature on the military family emerged mostly after the end of mass conscription and when deployments to Afghanistan became a reality. Within this later literature, scholars discovered the limits of the greedy institution model of the late 1980s. Moelker et al. (2019) argue that the concept of the family as a greedy institution still is valid but argue that it needs elaboration and refinement (Moelker et al. 2019). Along similar lines, for instance, Gribble et al. (2019) illustrate that UK military spouses experience the military institution as exercising control over them and their families, thereby challenging the identity of the nonmilitary spouse. At the same time, it renders support to military spouses and families through the creation of a military community. It remains to be seen how the reintroduction of conscription, with equal obligations for men and women, in countries like Sweden and Norway may influence the model.

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## **Military Family Stress: Causes and Effects**

As discussed above, a frequent starting point of the literature on military families is that service members are facing demands from both the military institution and their families, making them trapped between two greedy institutions. Another topic in focus in research on military families is the stress experienced by the military family and the consequences of this for the well-being of spouses and children as well as for the relationship between them. Reaffirming, and adding to, the factors that Mady Segal identified in the mid-1980s, Dursun and Sudom (2015: 129) summarize the potential stressor of the military family as “frequent relocations, temporary housing, spousal unemployment and underemployment, separations, deployments to hostile situations, and long and unpredictable work hours” (see also Dursun et al. 2019: 105; Meadows et al. 2016). Another study on the British Army, using mixed interview methods in investigating the experiences of British Army wives, came to similar conclusions regarding factors that cause stress (Dandeker et al. 2015). Aside from relocations and separation during deployment, these women also identified the demands of the army, which were seen as nonnegotiable, as causing tensions (ibid.,: 114).

Separation due to operational deployment has gained particular traction in the literature and is perhaps the most important cause of stress for military families. Research on military deployment and the well-being of military families gained

momentum as the number of foreign military missions increased in many Western states in the 1990s. At the same time, as the militaries downsized, they were generally used more frequently abroad, especially in peacekeeping missions. These new missions proved stressful for both the personnel involved and their families back home, partly because of their new and not strictly military focus (Moelker et al. 2015; Bartone et al. 1998; Segal and Segal 1993).

## **Stress Caused by Deployment**

The debate around military deployment explores which factors prevailed in terms of length, frequency, exposure, or just the fact of deployment. Whereas the literature tends to agree that operational deployment and separation are major stressors for the military family as well as for the officer or soldier, there are different and contrasting findings regarding the impact of the length of deployment. In Buckman et al.'s review of nine studies on the impact of deployment length, seven studies found that longer deployments had a negative impact on the deployed person's health (Buckman et al. 2011). Interviews and surveys of US peacekeepers deployed to Bosnia reached similar conclusions (Bartone et al. 1998). As for the well-being of the family left behind, a quantitative study including more than 250,000 wives of US soldiers in active duty in Iraq and Afghanistan similarly found correlations between longer deployments and the frequency of mental health diagnoses, such as depression and sleep disorders (Mansfield et al. 2010). Yet results in other studies challenge the correlation between the length of deployment and the stress and well-being of military families (Everson et al. 2017; Dandeker et al. 2015). Also, the level of intensity of engagement is, somewhat unsurprisingly, important. Life-threatening and dangerous missions increased the likelihood of long-term stress and secondary traumatization (Moelker and van der Kloet 2006). This strand of research peaked with large-scale boots-on-the-ground operations in Iraq and Afghanistan (De Angelis et al. 2018).

## **Variations in Stress Before, During, and After Deployment**

Studies on military families and deployed officers and soldiers have also concluded that the level of stress varies during the cycle of deployment (Tomforde 2015; Bartone et al. 1998; Dursun and Sudom 2015). Results indicate that deployment might affect different types of stressors, for example, financial stress or psychological stress, in diverse ways and also that these can be ameliorated by social support functions (Westhuis 1999; Dandeker et al. 2015; Green et al. 2013).

Similarly, the frequency of deployment has proven to influence stress within military families. For example, Van Winkle and Lipari (2013) used a large-scale survey and examined the relation between the number of deployments experienced by female spouses of active-duty military members and these spouses' perceived stress. They found that spouses who had not experienced a deployment reported the

lowest stress levels. Stress levels increase after initial deployments and decrease after approximately two deployments, which may indicate an element of resiliency that builds up as spouses get used to a deployment lifestyle. Stress levels again increase after several deployments, which may signify limitations to this resiliency over time.

Similar to the results of the studies cited above, a secondary finding showed that higher levels of social support predicted lower levels of stress, above and beyond the number of deployments. This relationship between social support and stress helped explain the negative relationship between parental status and stress. That is, spouses with children may have lower stress levels due to the social network that accompanies parental status. De Angelis and coauthors' (De Angelis et al. 2018) chapter on military families focuses on the length of deployment and its effects and finds similar patterns.

Over the years, research on military families has also come to include a focus on the impact of deployment for less studied groups, such as Army National Guards, veterans, and reservists (Wheeler and Torres Stone 2010; Dandeker et al. 2010; Van Slyke and Armstrong 2019). In the USA, reservists are often used in these missions, as a way to lift the burden of active-duty members of the armed forces. The families of reservists are less integrated into military life and may also be less aware of the support systems put in place to help them cope with separation (Segal and Segal 2006). Studies on the reserve forces in Canada and the UK show that reservists are, in a way, in an even more extreme situation in that they not only have to balance demands of family and work but also expectations that the civilian employer may have (Dandeker et al. 2010; Anderson and Goldenberg 2019).

## Other Military Family Stressors

Compared to operational deployments, other “stressors” of military life have received less attention in the literature. A recent survey study of spouses in the Canadian Armed Forces (cited in Dursun et al. 2019) shows that military families face a number of stressors connected to military work. The top three included the employment of the partner, healthcare issues, and relocation due to military service. Burrell et al. (2006) found relocation especially stressful, and it has been identified as a key stressor in other studies (Dursun and Sudom 2015; Dursun et al. 2019). It is perhaps not surprising given how a family move impacts many parts of the daily life for the family as a whole. Other studies have highlighted challenges related to marital reconciliation (Andres et al. 2015; Tomforde 2015).

Andres and Moelker (2010) explore factors influencing children's well-being with fathers' deployed in out-of-area operations. Focusing on Dutch service members and their partners before, during, and after a deployment to Bosnia or Afghanistan, they find that “the great majority of the children adapted quite well to the separation and reunion” (Andres and Moelker 2010: 418). Key in this respect seems to be the well-being of mothers as it increases “the chances that children will also be doing well in the course of parental absence” (Andres and Moelker 2010: 418). This contrasts sharply with Skomorovsky and Bullock's study (2017) focusing on

Canada, which finds that deployment negatively impacted children's well-being, routines, and family dynamics contributing to their stress. "Active distraction and social support seeking served as the most effective protective factors against deployment stress" (Skomorovsky and Bullock 2017: 654). Just as the other studies on the mental well-being of military spouses, these studies show that the conditions under which each effect prevails (positive or negative) may vary depending on a wealth of factors, ranging from type of deployment to broader societal structure.

The effects of the stressors identified above on the well-being of military spouses and children and on the relationship between the service member and his/her family members are not only significant at the individual level (Thomas et al. 2019). How stressors, such as separation, are handled can also influence the motivation of the soldier, making it a concern for the military organization. Military families and especially spouses have proven to be a significant factor when it comes to soldiers' motivation to deploy and stay on in the organization. Research shows that reintegration after deployment and marital reconciliation influence the willingness of service members to participate in future deployments (Moelker and van der Kloet 2006). Pluut and Andres (2019) found that positive experiences on behalf of the military family during deployment also enhance service members overall attitudes toward the military organization as well as their willingness to go on additional missions. As expected, both the process of reintegration and marital reconciliation benefited from an open attitude between spouses and a willingness to share the experiences that each partner had during their time apart (Moelker and van der Kloet 2006).

Research on American deployments in Korea illustrate that family adjustment, in turn, depends on the ability to communicate during deployment and the military leaders' support for families and soldiers (Segal and Segal 2006). Moelker and Andres (2019) also point to the importance of communication during deployment and how technological solutions for communication may help bridge the distance (see also Andres et al. 2015; Skomorovsky and Bullock 2017).

Although communication channels can be of great importance to keep the relationship going despite the distance, it can also create expectations that at times are hard to meet, thereby contributing to increased stress levels on behalf of both service and family members (Ender 1995; Faulk et al. 2012). Moreover, today service members and their families have higher expectations and demands on functioning channels of communication than before (Moelker et al. 2015).

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## **New Families, New Challenges?**

Societal transformation is another important topic that has kept scholars of military families occupied, particularly pertaining to the type of recruitment system and gender and age composition of the force. This discussion has taken two forms: first, the implications of a more diverse force on new kinds of military families and, second, the impact of a new type of military families on the military. In the USA, the end of conscription has led to a more gender-diverse force. Available statistics

illustrate how female officers, and their family lives, differ from male officers. For example, servicewomen are less likely to be married and have children (Wahl and Randall 1996). Those who do marry are far more likely to marry male service members or veterans compared to their male compatriots and to have been married more than once (Masson 2019:47). Civilian husbands, on the other hand, will likely have a harder time integrating with the military community given that the norm still is that the officer on active duty is a man and that his spouse is a wife (Bourgh 1995; Little and Hisnanick 2007). Just like civilian wives, civilian husbands also tend to earn less than their military counterparts, although the difference is not as great as for the wives (ibid, 2007; Ziff and Garland-Jackson 2019).

With the lifting of bans of women serving in ground combat role in many states, another set of authors have focused on the trajectories of female service members (Duncanson and Woodward 2016; King 2015). Focusing on the Israeli case, Eran-Jona (2010: 19) studied “gender arrangements in families of male and female career military personnel as viewed by their civilian spouses.” The study analyzed the differences in attitudes toward family life and examined the differences in work-family practices among the Israeli Defense Forces’ career servicemen and servicewomen. The findings indicate that the:

IDF’s heavy demands on career personnel, regardless of gender lead to the construction of family and couple arrangements that deviate from the norm in civilian Israeli-Jewish families of similar characteristics. For the servicemen, this demand creates a “traditional” role division model that places the entire burden of family work on their wives; for the servicewomen the same demands create a relatively “egalitarian” role division model, by placing more of the burden of “family chores” on their husbands. (Eran-Jona 2010: 19)

More recent work has showed that such widespread unfairness still holds strong not only in terms of career trajectory but also in terms of retention. Despite efforts to improve women’s military representation, mid-career female officers leave “at twice the rate of male peers” and “women’s turnover is influenced by family life including marriage and parenthood” (King et al. 2019: 1). Thus, this study explored a single career point (mid-career) at different family intersections (married, unmarried, with and without children) to elucidate work and family factors associated with female officers’ retention decisions. Focusing on Air Force survey data, the authors find that “after accounting for satisfaction, work factors were insignificant for all subgroups, but family factors (as hypothesized) were significantly associated with married women’s career intentions. Results suggest that policies targeting family support/satisfaction may improve retention” (King et al. 2019: 1).

The second big topic of discussion has been on changes in family dynamics and interrelationships. Moelker, Rones, and Andres suggest that the figuration of the military family in most cases still can be depicted as a triad made up of father, mother, and one or more children. Dyadic family figurations of course exist in single-parent households or in households without children (Moelker et al. 2019), but they are less frequent. The three participants in the triad are interdependent, and their changing power relations determine its dynamics. Social changes challenge the relationships within the triad, the consequence being that the command household,

in which the man holds disproportional discretionary power, is giving way to the negotiation household. In such a household, tensions and shifting power balances between father, mother, and child(ren) are being negotiated. Often the three are “equal political agents in the family diplomatic system” (Moelker et al. 2019: 9). The command household is seen as a model for hegemonic masculinity, which corresponds to the idea of the military as an institution. This implies that a shift toward a negotiation household model also challenges the idea of hegemonic masculinity. Since the partners in the triad are more equal today, the work-family conflict has become more intense (Andres et al. 2015; Ziff and Garland-Jackson).

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## Social Support

Another important and related body of research focuses on military families in relation to social support (Bartone 2015; Moellker et al. 2015; Siebler 2015). This debate encompasses studies that have explored social support structures for military families in general and when service members were deployed abroad. The perhaps most important change in this regard has been the evolution of the military organization into a “normal organization” as opposed to when the families lived in compounds. Variations among states and military service branches seem key in this respect.

Originally, military family support organizations often were established as a result of political activism by family members – making military families a political force (Stanley et al. 1990). The strategy used was co-option, and grassroots influence became institutionalized in different ways – it could be military personnel who facilitated volunteers but also volunteers working independently from the armed forces. Although the demands on military wives have lessened over time, even nowadays, they are generally expected to conduct volunteer duties and participate in family support activities for the benefit of the military organization (Harrell 2001; Hosek et al. 2002). Despite the fact that many of them are active on the labor market, they need to accommodate the demands that the military organization put on their spouses, including drills, training, and deployments abroad. Lysak (2019: 59) discusses the important role of women in the creation of the military profession, referring to the unpaid and undervalued work they do as being part of a “military-family industry.” Harrell has also argued that women may get involved in volunteer work to maintain the status of their husbands and that there are both formal and informal expectations on them to do so (Harrell 2001). The commitment of military wives also tends to depend on the rank of their husbands, with wives of more senior commanders and NCOs generally more engaged in volunteering (Moelker and van der Kloet 2006). An interview study with wives of service members of the British Army also revealed that some women perceived the rank of their husbands, rather than their own merits, to be the determinant of their own status (Dandeker et al. 2015).

Co-option has become a more difficult strategy today as there are more groups outside the AF with demands on influence and also more diverse groups. Previous



research in the Netherlands has shown, for example, that some people get excluded – for example, spouses to those deployed in observer missions or missions only including the air force (cited in Moelker and van der Kloet 2006). As mentioned above, civilian husbands of female officers also tend to be less embedded in the military community.

When discussing the role of the family as providers of support to cope with stress, Moelker and van der Kloet (2006) note that there are important variances between social support networks. They aim to classify different types of social support networks that are available to the individual and put forward a taxonomy that captures differences between levels of “dependency” on one axis and classifies the support relations on an individualized-communitarian continuum on the other. The variations in both the demands and the character of social support were illustrated in an interview study on British military wives, conducted by Dandeker et al. (2015). It revealed that these women did not, as their firsthand choice, turn to the military for social support during the time their husbands were deployed. They rather relied on informal networks for social support.

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## **Concluding Remarks: Continuing to Develop the Debate on Military Families**

The frontier of the ongoing debate on military families is heading in three main directions. First, most studies focusing on military families identify the tensions arising from military personnel belonging to two greedy institutions at the same time, the family and the military (for a review see Moelker et al. 2019). More could be done to escape this frame and to mirror recent transformation in societies. King (2015) talks about “a quite radical transformation in social-military relations whereby the change is profound, complex and even paradoxical” (King 2015: 1). Wong and Gerrass (2015) in their analysis of forward operating bases (FOB) suggest that the relations between individual service members and their partner and children have become more intense and that they have infiltrated the military professions in operations even in FOB. King (2015: 1) asserts that a “domestic-military nexus is observable, reflecting a wider transformation of gender relations.” Also, more recent patterns of deployment, such as the use of the military domestically, might shed light on some of it.

Second, research on military families has traditionally taken a multidisciplinary approach with contributions from psychology, sociology, history, anthropology, and more. Yet the field would also benefit from a political science perspective, especially as the character of the state, in regard to how traditional, nationalistic, secular, or globalist it is, will matter for what issues become interesting to look at and also what states are suitable for comparisons. On the point of comparison, the paucity of studies taking a comparative approach is somewhat surprising. While the literature acknowledges that the level of greediness varies over time and between armed forces, no research so far has systematically reflected on how the greediness of the family also depends on the characteristics of the state. Only very recently, Moelker et



al. (2019) distinguish between three levels of analysis: the state (macro), the organization (meso), and the family level (micro). They suggest that by studying the military family, insights are gained as to how the military organization and the state change (2019: 10). Although it seems obvious that state-level changes will impact the military organization and the family/individual, it appears counterintuitive to use a bottom-up perspective to capture this. A rewarding starting point could indeed be the very character of the state or the level of trust in state institutions. Overall, to be useful on a broader scale, these aspects need to be considered. Since military families often are seen as crucial regarding their support functions, it will matter what logic underpins the welfare state at hand (see Kasearu and Olsson 2019 for an example). It seems plausible that in a welfare state based on the so-called male breadwinner logic and a traditional division of paid and unpaid household work between the husband and wife, the family will be less inclined to place other demands on the individual military serviceman than in a social welfare state based on the working adult logic (Esping-Andersen 1990).

Relatedly, it might be worth reflecting on the context-specific relationship between the state and the individual. To illustrate, both Sweden and the USA score high in terms of individualism. Yet the kind of expected relationship between the individual and the state could not be more different. Despite the fact that Sweden is a state that, just like the USA, is considered highly individualistic, trust in institutions is high, levels of corruption are low, and the state is considered a precondition for individual freedom rather than a greedy institution (Rothstein 1998). This implies in the case of Sweden, a “big” state that provides services, generous parental leave, and better child care, thereby making the military and the family relatively less greedy. By contrast, the USA supports a state that is small in size and values individual freedom (including state intrusion), which would result in a relatively more greedy family.

Furthermore, another problem with using the family as a unit of analysis is that it is not always recognized as important by the affected. In Scandinavia, the military is not seen as a distinctive entity with ambitions of governance, and the gap between civil society and the military is not perceived as troublesome (Ledberg 2019). In Sweden, families that in international research would be identified as military families do not identify themselves as such (Olsson and Olsson 2019). Instead, they are seen as similar to any other working family and are part of the same welfare regime (Kasearu and Olsson 2019). Although the literature sometimes takes into account that families are not always made up of father, mother, and child, many studies continue to assume a traditional family structure. Eran-Jona and Aviram’s study on new families in the Israeli Defense Forces and Skomorovsky, Bullock, and Wan’s study on single parents in the Canadian AF are important exception to this rule (Eran-Jona and Aviram 2019; Skomorovsky et al. 2019).

Third, the debate on military families would benefit from a better connection to other studies in military sociology relating to the transformation of the military profession. (This chapter has an author and I believe the author’s name should be used. See comments below.) (For an overview of what military sociology encompasses, see chapter on “► [Military Sociology](#).”) Other key themes in military

sociology may certainly influence the discourse on military families. When we think about cohesion dynamics, King has variously written about how professionalism could be the source of new forms of cohesion, based on repetition and drills (A. King 2007). Following this logic, anybody with the right competence should be able to participate in small groups, and that should of course also open up to women (see also chapter on “► [Military Women](#)”). This would imply longer deployment also for women, higher levels of retention, and potential consequences of challenges of military families. Notwithstanding the transformation of the military, military families remain a highly important locus where operational experiences are made sense of. Gustavsen in her work explores the role of military families for meaning-making exercises (Gustavsen 2016). Similarly, Sarah Kayss (2018) writes on how memory influences recruitment strategies in the officer corps in the UK and Germany. This work highlights the importance of belonging to a military family. Relatedly, the literature on military families extends to the transition to the civilian sector and veteran status as discussed in the chapter on “► [Veterans and Reservists: Views from Within and Without](#).” There is indeed a literature on veteran families that mirrors many of the issues found in the military family literature generally. In summary, the field of military families arguably needs to engage in broader conversations with other related debates in military sociology, such as the one on veterans, expeditionary operations, cohesion, and the gendered nature of the military institution as seen in the persistency of sexual assault and harassment. Across all these debates, the negotiations of roles within the individual seem of great importance. (We gratefully acknowledge Vince Connelly for raising this point at the IUS conference 2019.)

Fourth and final, it is telling that the majority of studies are still single-case studies, dominated by a US focus, and that most of them are descriptive. More comparative, theory development work is needed to continue the cumulative research progress of this importance debate within military sociology.

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## Cross-References

► [TBA](#)

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# Popular Culture and the Military

Morten G. Ender, Brian J. Reed, and Jacob Paul Absalon

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## Abstract

This chapter consolidates just over 100 books and journal articles at the intersection of the military and popular culture in the social science and humanities studies literature. All studies are English language publications and focus on popular culture and the military in the United States and the United Kingdom. The studies coalesce around 18 distinctive topics known as genres in the popular culture literature. The genres include literature/books, films, television, mass media, music, video games, board games, fashion, photography, and sports. Eight emerging genres include food, technology, graffiti, scandals, social

M. G. Ender (✉) · B. J. Reed · J. P. Absalon  
Department of Behavioral Sciences and Leadership, United States Military Academy,  
West Point, NY, USA  
e-mail: [morten.ender@westpoint.edu](mailto:morten.ender@westpoint.edu); [brian.reed@westpoint.edu](mailto:brian.reed@westpoint.edu); [jacob.absalon@westpoint.edu](mailto:jacob.absalon@westpoint.edu)



media, toys, celebrities, and comics. Most studies are published in the journal *Armed Forces & Society* followed by the *Journal of Popular Culture*; *Critical Military Studies*; and *Media, War & Conflict*, among other journals, books, and edited volumes. Qualitative methods and films dominate the popular military culture studies. Popular military culture is a burgeoning subdiscipline.

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**Keywords**

Popular culture · Military · Genres · Films · Music · Television · Fashion · Video games

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## Introduction

There is no seminal work in the study of popular culture and the military. Indeed, there is no single, overarching theory of popular culture (Danesi 2019). Further, a scan of treatments of popular culture textbooks show that they regularly do not include references to the military, war, soldiers, or the armed forces. When there are exceptions, the studies focus on a specific form of popular culture with a military reference such as film (Boggs and Pollard 2007) or gender (Frühstück 2007). Popular culture scholarship certainly emerges out of or at least alongside the study of cultural sociology (Grindstaff 2008). One reason perhaps for the military omission is that the study of military culture has traditionally been oriented toward an integrationist model at the suppression of a fragmentation orientation (Winslow 2007). The former relies more on traditional positivistic epistemological approaches to studying the military such as surveys and experiments. These strategies for research have long been embraced by science and are well-grounded within and restricted to the military institution. Fragmented models rely more on qualitative and interpretive methodologies such as ethnographies, interpretive work, and participatory action research. These methods are less anchored in the military institution and scholars using these latter techniques are less emic in the military. This disjuncture likely contributes to the lack of synthesis of studies of popular culture and the military. Yet despite the orientation, there are in recent years numerous desperate and rich studies.

Conceptually, social scientists connect more with Grindstaff's definition of popular culture referencing Mukerji and Schudson as "...the beliefs and practices, and the objects through which they are organized, that are widely shared among a population" (Grindstaff 2008, pp. 207–208). Similarly, there is resonance with the reference to Williams on the four common uses associated with the word popular: "...that which is well liked by many people, that which is deemed unworthy or inferior, work deliberately seeking to win favor with people, and forms of culture made by people themselves" (Grindstaff 2008, p. 207).

One shining beacon on the hill of popular culture scholarship is that it is concomitantly becoming more sociological and more interdisciplinary. This potentially benefits social scientists and those that study the military as much of the



scholarship is inter- and multidisciplinary. This makes the future study of the intersection of popular culture and the military vibrant, fruitful, exciting, and penetrating. However, Grindstaff warns that sociologists, anthropologists, historians, political scientists, and others may become lost to the study of popular culture as the preoccupation with mass media (e.g., television and films) is at risk of monopolizing the field. Our way ahead here does not necessarily show this to be the case. But the reader should be warned. The publication of military studies has spread rather wide but prudently around popular cultural topics – what popular culture scholars call genres – “the books, movies, television programs, and websites [etc.] that are produced for mass consumption” (Danesi 2019, p. 41). The audience consumes different forms within the genre. The audience refers “to the typical readers, spectators, listeners, viewers, and web navigators attracted to a certain genre” (Danesi 2019, p. 41).

This chapter is informed by mostly scholarly literature at the intersection of popular culture and the military. Primary sources for searching included such scholarly journals as *Journal of Popular Culture*; *Armed Forces & Society*; *Journal of Critical Military Studies*; *Journal of Military Behavioral Health*; *Military Psychology*; and *Media, War, and Conflict*, among less ubiquitous others. From here published books on the topic were sought out – with most co-located in the book review sections of these journals. Additionally, Google Scholar searches using key terms such as “popular culture,” “material culture,” “nonmaterial culture,” “military,” “war,” “soldiers/marines/sailors,” and “armed forces” yielded sources. Featured are 104 mostly scholarly sources limiting inclusion to recent or stand out selections anchored in a specific genre. Ultimately, the genres featured below include 10 salient areas: literature, films, television, mass media, music, video games, board games, fashion, photography, and sports. An 11th genre represents a set of emerging topics including food, technology, graffiti, scandals, social media, toys, celebrities, and comics. The chapter concludes with popular culture topics holding nascent potential at the intersection of the military.

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## Genres

### Literature and the Military

Literature and the military include both nonfiction and fiction books. For nonfiction, Woodward and Jenkins (2018) in *Bringing War to Book* provide insights to representations of war and the military experience treating them as process and social production. The book explores and provides a somewhat how-to on military memoirs. They study 250 military memoirs published since 1980 about the British armed forces. They also utilize available interviews from published military memoirists who tell stories about their books. Major themes they unearth include: the description of the military memoir; motivations for writing; authors’ reflections on their readerships; inclusions and exclusions within the text; the memories and

materials drawn upon; the collaborations with a range of others to get to print; and even the design of unique covers.

Many service members and veterans write autobiographies. Kleinreesink (2014) provides comprehensive analysis of nonfiction, autobiographical books, published between 2001 and 2010 in Dutch, English, or German in the United States, the United Kingdom, Canada, Germany, and the Netherlands. These books mostly deal with the Afghanistan deployment. Most notably for the study of popular culture, the audience is the public writ large. The book attempts to answer four distinct questions: (1) who writes an autobiographical book about deployment in Afghanistan? (2) Who publishes such books? (3) what is the content? and (4) why do they write?

Using both a mixed-method quantitative and qualitative, cross-national, and interdisciplinary approach, foremost, there is a direct proportional relationship between the number of soldiers having Afghanistan deployment experience and the number of books produced by country.

Scholars have gone in depth on individual books as well. Rosenhaft (2019) uses historical examples of what is referred to as “military marginalia” interpreting WWI-era best-selling memoirs. Further, old memoirs can take on new life in the twenty-first century (Samet 2019).

To say that books and the military are passé is to be mis-informed. Bakken (2020), Samet (2007), and Fleming (2005) have offered up sweeping accounts as civilian faculty members at US military academies.

In terms of fictional books and the military, Harper (2001) offers a content analysis of cusp twenty-first century best sellers for their treatment of the military, service members, and war. Anchored within the civil-military gap conceptualizations of the 1990s, he discovers lacunae on military topics in the top selling fictional books of the era. But he does not view this as problematic – the nation was not at war. The last 20 years may prove right as the world waits for a content analysis to be conducted of recent books. Further, a subgenre has emerged in military fiction: popular military romance fiction (Kitchen 2015).

## Films and the Military

Films and the military is the most prominent genre of the 18 covered in this chapter. One of the first films ever made could be labeled a military training film titled *A Cavalryman Mounting and Dismounting from his Horse in the Acceptable Military Style*. The modern military and film are intimate. They benefit society, soldiers, the war effort, the military, and arts institutions, and in many cases, they even conspired (Wasson and Grieveson 2018). Fictional military films as well as documentaries are popular forms of entertainment and are even teaching and learning tools.

The fictional war film is considered a subgenre of films more generally. Films about most wars exist (Doherty 1999) as do topics in and around war such as Nazism (Birdwell 2000), propaganda films (Donald 2017), and the veteran (Katzman 1993).

Researchers have conducted examinations of particular military and war topical representations in films including descriptions of military culture (Harper 2001),

perceptions of military leaders (Kremble 2007), the “leaving no soldier behind” creed in two highly popular films – *Saving Private Ryan* and *Black Hawk Down* (Samet 2005); uniformed heroes in a bureaucratic context (Lee and Paddock 2001); psychiatry (Tsika 2018); boredom (Ender 2012); military horror films (Hantke 2010); military comedies (Erickson 2012); military women (Donald and MacDonald 2014); African-Americans in the military (Reich 2016); the navy (Raynor 2007); military leader-follower relations (Warner 2007); and military children (Ender 2005). Finally, Lawrence Suid (2002) provides a comprehensive resource of brief descriptions and novel insights to military films dating back to 1911. A table in his appendix provides a list of hundreds of military films and the five degrees of cooperation, in any, the Pentagon provided on the films.

## Television and the Military

Television is younger than film, but like film, TV is burgeoning in its relationship with the military. Television became ubiquitous in American homes in the 1950s, purchased by families, and watched regularly by Baby Boomer children. Those children received a diet of programs in the military television genre including shows such as *West Point, U.S.A.* (1956); *Combat!* (1962); *Hogan's Heroes* (1965); and later *M\*A\*S\*H* (1970); *Jag* (1995); *Band of Brothers* (2001); *The Unit* (2006); *Generation Kill* (2008); and the recent *Seal Team* (2017). In fact, Michael Herr (1977) argues in his best seller, *Dispatches*, that Baby Boomer men went into combat in the jungles of Vietnam with images in their mind of the role of soldier socialized by the earlier television shows and films they watched as children.

The 1990–1991 Persian Gulf War is the first TV War – essentially shown live around the world. Scholars soon argued TV did not serve as an unbiased arbitrator but as culpable, positioning the politics of war (Kellner 1992). The TV and print media press pool has had a contentious relationship dating back to Vietnam (Paul and Kim 2004). Television news outlets have relationships with the military and respond to the leadership (administrations) relative to the military and war aims (Takacs 2012). Boggs and Pollard (2007) are on par with an emerging critical approach dating back to the Gulf War in the early 1990s emphasizing the culpability between Hollywood TV and film and the military.

Television can shape the historical, social, and political narrative of the military and war through documentaries such as *America's Most Wanted: Terrorists* (Takacs 2012, pp. 42–43) or the popular documentaries such as *Civil War* or *Vietnam* by Ken Burns. Beginning with the all-volunteer force in the United States in 1973, television became a medium for military recruitment commercials (Dertouzos 2009). Military recruitment advertisements are diverse, involved, and transformational rather than informational (Park et al. 2017). Moreover, such TV ads are persuasive (Fu 2013).

Themes in television (and film) include the American as underdog, insurgent, and pivoted against tyranny (Hill 2014). The intersection of TV and military vary in the kinds of methods used including experimental designs (Teigen 2012) and qualitative methods, especially visual analysis (Penn and Berridge 2018). Content analysis of

television content from communications studies is a particularly prominent and notable method.

One example, using focus groups of active duty military members, military veterans, and military family members in the United Kingdom, Parry and Thumin (2017) conduct a novel and fascinating study of these three groups reaction to popular TV media portrayals of contemporary military experiences. More broadly, they find and conclude that popular media are a key component in the civil-military media project of reconciliation and awareness-raising.

## Mass Media and the Military

The US military receives limited and restricted mass media coverage outside of war time. Exceptions are coverage of veterans – those having left the organization or when significant events occur such as the Walter Reed Army Medical Center scandal where *Washington Post* reporters Dana Priest and Anne Hull (2007) covertly and undercover reported on horrific conditions at the hospital in the care of injured soldiers. Historically, in the United States, reporters had limitless access to battlefields dating back to the American Revolution. The 1960s and Vietnam War changed access – as television became a pervasive medium for US households to receive visual access to the battle zone (Segal 1975). The First Gulf War in 1990 allowed for real-time live coverage of war with embedded reports – known as the “CNN War” – war became live and global for multiple publics (Cooper 2003). Interestingly, letters that were once considered private – such as US Civil War letters written by soldiers and loved ones – became public over time – with lag time, unlike soldier and loved one blogs from the home and war fronts today that go live immediately (Knickerbocker 2005).

As many as 1,600 reporters covered the Iraq War with another 600–700 embedded with units (Paul and Kim 2004) – notably 139 had been killed in Iraq by December 2006 (Ender 2009). Research has compared the reporter vantage points (Aday et al. 2005). Embedded reporting continues at this writing and there appears to be legal justification for maintaining their access (O’Neil and Rosenthal 2003). Survey research reports praise from media executives and approval from the public (Paul and Kim 2004). Research on Army wives shows a convoluted relationship with live TV coverage of war (Ender et al. 2007). News reporter Martha Raddatz (2007) describes the spin of actual events in her book *The Long Road Home* where TV and radio news reports about a fire in the Sadr City section of Baghdad “... neighborhood of Baghdad left four U.S. soldiers dead and at least forty wounded” (pp. 231–232). Recent studies of print media and the military seem conspicuously absent with a few exceptions (Fahmy and Kim 2008; King and Lester 2005; Schwalbe 2006). This despite what appears to be an abundance of stories written about service member experiences in Iraq and Afghanistan.

## Music and the Military

Music and the military are inextricably linked. So much so, militaries have their own bands. In the German Bundeswehr, women's roles were even confined to two – military bands being one (Kümmel 2002). While songs and themes have existed throughout military history and wars (Sweeney 2001), WWII likely has the most songs directly related to the war. Jones (2006) estimates that 1,700 military and war-related songs produced by professional songwriters are archived and available. In the content analysis for themes, a range surface that kept the war in the public's consciousness and boosted morale on both the war and home fronts. Themes found include isolationism, the draft, army life, patriotism, popular personalities, rationing, coping, girlfriends, victory, and homecomings. Bing Crosby's "I'll be Seeing You" and the "Boogie Woogie Bugle Boy" by the Andrews Sisters topped the popular music chart on radio during the period. The new link between soldiering and popular music support continued after the war. The biggest pop star on the planet, Elvis Presley fulfilled his military draft requirements during the 1950s with ginormous fanfare and he later wrote the popular song "Soldier Boy" in 1960.

As the Vietnam War gets underway in the 1960s, a host of social and technological movements collided during this period merging music and the military. The major three changes included the inexpensive and easily obtainable 45 rpm record became accessible to the masses, radio programming diversified, and finally, cultural mores were challenged and changed (Perone 2001). Popular music related to war decidedly took a different turn. While WWII music generally supported the war and home front efforts, Vietnam era music became far more critical, counter-cultural, anti-war, anti-military, and subversive. Songs during this period also dealt with the plight of the soldier – "I Gotta Get Out of this Place" (1965 by *The Animals*) – and some pro-government songs as well.

More recent examinations of war, the military, and popular music have become increasingly complex. Musicologists have offered insights to war and music during the recent war in Iraq (Daughtry 2015; Pieslak 2009). They tackle fascinating topics relating music to military recruitment, combat motivation, personal experiences, and soldiers creating their own music. Pieslak (2009) also has a fascinating chapter where he begins an examination of two musical genres and their comparative treatments of war and the military: rap and heavy metal.

The past two decades has seen the complexity increasing in the study of war, the military, and music. For example, rock bands, such as Queensrÿche, are doing military concept albums featuring soldiers. Marital or military music has a long tradition in the military; however, individual soldiers are producing their own music and music videos while in war zones for personal and commercial uses. Further, some have argued there is a militarization of popular music and videos (Gault 2018) and there is even an argument for the weaponizing of popular music (Gorton 2015).

## Video Games and the Military

*Call of Duty* (2003) is one of the most popular video games on the planet. It is a shooter game set originally in World War II but subsequent versions are set in more modern war contexts. Estimates are that 40–50% of US army soldiers and military academy cadets play video games fairly frequently (Orvis et al. 2010). While video games are not exclusively used by male youth, millions of military age teenagers and youth play the games.

Bos (2018) provides an in-depth empirical study of the popular game *Call of Duty* from a political geography perspective. Using a multi-method approach including 32 interviews and the collection of video ethnographic data, he connects the macro geopolitical to the micro, everyday individual video gaming in and around playing a virtual war. The study makes three notable contributions: (1) provides specific details on players; (2) focuses on the social and consumptive spaces of the popular culture within the context of the domestic at the intersection of the private, public, and virtual; and finally (3) contextualizes the broader social, material, and technological relations that are reinforced, broadened, and contested at the geopolitical level.

Mantello (2017) argues that *Call of Duty*-type military shooter video gaming is a new subculture that has evolved in post-9/11 world. The subculture has grown from a marginal, excessively violent fantasy game perhaps counter to the culture to one of social acceptance where military life has become normative in the domestic sphere. Moreover, the game has merged with the social reality of simulated military training – what Baudrillard would dub hyperreal (not the surreal). And thus, the games become a popular socializing agent, preparing youth for their future training in military roles. Additionally, he highlights how the games are cultural and economic as much as technological. Thus, the games now are no longer entertainment for the popular culture but are political as well.

Jarvis and Robinson (2019) provide a recent and rich foundation on military video gaming scholarship. Setting the stage with an overview of contemporary scholarship on war and global politics, they emphasize three distinct ways where the ephemeral notion of “temporality” manifests in military videogames: (1) historical background; (2) the setting and structure of games; and (3) the duration of games. These features provide a useful framework where types of military videogames: mainstream military shooters, critical military shooters, critical procedural military games, and civilian-centered military games, can be studied.

The rise of the so-called military-entertainment-complex is nowhere as rich as in the study of video gaming. The military shooter and related games extend far into popular culture. The extent is revealed in video gaming profits that exceed music and film entertainment combined. Further, video gaming has implications for other social institutions beyond the military especially education.

## Board Games and the Military

Traditional board games might seem obsolete and innocuous following the ubiquitous video games, but they are fruitful areas of inquiry and remain popular around the globe. Among the most popular and best-selling board games include four war-games: *Risk*, *Axis and Allies*, *Stratego*, and *Battleship*, not far behind chess, checkers, and backgammon. Further, games generally, and board games specifically, have a long history in military training. Indeed, to war game is to use a wall, sand, table, or screen as a collectively accessible surface to study the battlefield. Four games are showcased below with popular potential that purport to educate and train in and around the military.

Military students, typically U.S. Army majors, at the U.S. Army Command and General Staff College (CGSC), at Fort Leavenworth, Kansas, USA, received instruction in a low cost, board game to enhance visualization and description skills (McConnell and Gerges 2018). The game is based on a nineteenth century Prussian board game called *Kriegsspiel* (trans. war game). The research instructors use a quasi-experimental design with a control group – in this case, 79 students learning traditional tactical instruction. The experimental group consists of 32 who play the role-playing war game. The research instructors added outside observers not familiar with game for great objectivity. As expected, the experimental group outperformed overall and did so in four unique ways. The authors hold that the findings might have application in nonmilitary contexts, in particular those involving leaders and followers in emerging threat and opportunistic environments.

Similarly, Ender (2004) has successfully modified one of oldest and most popular board games on the planet – *Monopoly*. It is considered the leading proprietary game in the Western Hemisphere. Published in 43 countries, most people have familiarity with the game. The objective of the traditional game is based on one primary rule, to become, as the *Monopoly* rules state “. . .the wealthiest player through buying, renting, and selling property.” In the Ender modified version, players are assigned to military families of different ranks and all the rules including costs and payments are adjusted to the sliding scale of military ranks. For example, when passing “Go,” an officer, a Lieutenant Colonel (a LTC is a higher ranked military officer usually with 12–14 years of service) receives \$2,000; a lower middle socioeconomic class Warrant officer (W4, a higher ranked specialized officer with 12–15 years of service) receives \$1,500; a working socioeconomic class senior sergeant (E9 – Sergeant Major, a higher ranked enlisted soldier, with 17–20-plus years of service) receives \$1,000; and finally, a lower working socioeconomic class enlisted sergeant (E5 – Sergeant, with 4–6 years of service) receives merely \$500. Likewise, rules for going to and getting out of jail are differentiated based on socioeconomic status. The game is a visceral social inequity teaching and learning tool for anyone affiliated with the military or not. The game is concomitantly both familiar and novel, inexpensive, experiential, and simple. It has been successfully adopted with civilian high school students across the United States, cadets at West Point, and civilian graduate and undergraduate students.



While not a military game per se, Hoy (2018) reviewed the war-gaming literature and developed his own board game called *Policing the Sound*. It "... is a game-based learning activity derived from archival research that attempts to challenge players' assumptions about criminality, government power, cultural production, and source base by allowing players to make decisions within a constrained historical environment" (p. 119). Notably, Hoy successfully taps, from student feedback and internal and external observers, into the popular experiential features of gaming in a novel and impactful way with both undergraduate and graduate students to experience and empathize with history.

## Fashion and the Military

The uniform has long played a significant role in providing symbolism for the military. The military uniform, in most contexts, serves as a marker between and within groups, highlighting and downplaying statuses, provides legitimacy, suppresses individuality, and facilitates social control. Tynan and Godson (2019) provide an introduction and some chapters on the social-historical meaning of uniforming institutions including the military. Likewise, Tynan (2016) provides a framework upon which to study and make sense of material and visual culture in and around the military. In a special issue on textiles and the military, researchers put forth that materials comprise a range of popular equipment including uniforms, blankets, tents, "...sails, pouches, caparison, parachutes, early model airplanes, camouflage nets, dinghies, body armor and more ... " (Galster and Nosch 2010, p. 1). The military can also influence the society. Paul and Birzer (2004) argue critically that civilian police forces are militarizing and one form of militarization are uniforms – especially those that simulate combat. Militarized uniforms here on the one hand are sought to further the legitimacy of the police force, but ultimately separates the police officer further from the public and ultimately reinforces and perpetuates power differences with the public they are attempting to serve. Further, camouflage is the technology of concealment and has been diffused into the arts, community, and social movements (Behrens 2012).

Popular culture likewise adopts parts of the military uniform. Langkjaer (2010) draws connections between the youth counterculture of the 1960s and US military in Vietnam. For example, rock star Jimi Hendrix wore military style jackets on stage and around town (notable Hendrix had been drafted and served in the 101st Airborne Division in the early 1960s). The 1960s counterculture movement mocked the uniform creating anti-war fashion. Finally, not limited to the United States, Kinsella (2002) argues that modernism, militarism, and the uniform are inextricably linked in Japanese culture – especially among youth to include schoolgirls. And likewise, Playboy magazine centerfolds curiously forged toughness through wearing of masculine clothing such as combat boots (Began and Allison 2005).



## Photography and the Military

Photography is born in France in 1825 and by the time of the US Civil War, military photography is in the war zone. However, the technology proved primitive and could not be reproduced in printed publications for the masses. By WWI, photography is a hobby of millions and photography is being used both by and against the military as reconnaissance, propaganda, and for personal consumption. Today, digital, photographic images are ubiquitous.

Foremost, soldiers take their own photographs in the modern war era. Jakob (2017) argues that war trophy photography is a new soldier practice at the intersection of combat photography and war trophy collections. Reviewing some of the salient literature on the long history of photography capturing war and brutality, he emphasizes how early photographs evolved from being staged for posterity and mass remembering. He uses three specific photographs: one each from World War I, World War II, and Abu Ghraib in Iraq via both a comparative historical approach and visual semiotics on the reproduction of emotions. This study is less about the capturing of violent acts rather on representation and circulation of these acts via images.

Two other studies focus on imagery in and around the military and a specific subgroup within the military – women. First, McEntee's (2018) research takes on the representation of military women in news photography. She reviews the history of women being photographed in war with the first images emerging in newspapers in 1901. Using gatekeeping theory with special emphasis on visual and war-time gatekeeping coupled with a grounded theoretical approach and a mix-methods qualitative design, McEntee gets direct thoughts of editors and producers who decide how military women are photographically represented in combat roles in print and broadcast media respectfully. While equality is espoused when wanting to present both men and women in combat roles, there is some hesitation on the part of the journalism gatekeepers when it comes to the depicting women in violent combat roles.

Another study unobtrusively examined online comments to two different images of military women breastfeeding: a 2012 image of two Air Force mothers breastfeeding and a 2015 similar image of 10 Army mothers breastfeeding. The former is framed negatively and the latter more positive and progressive (Midberry 2017). The keen dissection of just over 1,000 comments contextualizes the image with the narrative and finds that various discourse themes are deployed by the audiences including military masculinity, nationalism, sexuality, motherhood, women's progress, and good worker. The study concludes that more research in this genre would be fruitful as the current discourse is harmful to women and children.

## Sports and the Military

General Douglas MacArthur is famously quoted as saying, “Upon the fields of friendly strife are sown the seeds that upon other days and other fields will bear the fruits of victory.” Sports and the military; the military and sports – they have long been hand in glove. Anchored in the work of Tilly and in particular Lasswell’s garrison state, Vasquez (2012) argues that military institutions shaped college football in the United States as it is known today. Partially ignited by the support around the army and navy service academies and WWI and later WWII, coupled with conscription, interest in football spread from the military into the civilian society. Military units played football and members evolved into the formation of the country’s first collegiate athletic conference and the National Collegiate Athletic Association. American football further institutionalized and expanded globally as Seifried and Katz (2015) found that the US military allowed senior officers and officials to manufacture bowl games and used American football across the world from 1942 to 1967 as both product and source of innovation. The games helped with mass mobilizations and training of men for the major and different war efforts that occurred during the mid-part of the twentieth century.

More generally, scholars have expanded the aperture of the impact of sport on military operations. Cárdenas and Lang (2018) review the literature and conduct interviews with German and Colombian military officers to investigate if and how sport may be used to advance the success of peace support operations. Similarly, researchers use interviews to explore how competitive sports, in this case the Invictus Games, may or may not leverage the promotion of health and wellness in military veterans (Roberts et al. 2020). Hinojosa et al. (2019) use Bourdieu’s theory of cultural capital to understand veterans’ greater rates of musculoskeletal disorders compared to nonmilitary civilians.

One element of sports and the military is the separation of the two institutions. However, Penn and Berridge (2018) study football (soccer) and the military in Britain and find “invisible nationalism” to be the norm rather than the exception where the presence of the military at major British sporting events is hidden in plain sight – in other words, it is both highly visual and culturally and politically not visible. Magraw (2019) discusses the legal implications of “paid patriotism” in the form of military salutations not at professional American football games where much press coverage has been concentrated, but in the flourishing Major League Soccer (MLS) as well.

The relationship between the military and sports appears fairly wide open for inquiry. Vasquez (2012) calls for sociohistorical studies connecting the military with other sports such as equestrian competitions and winter Olympic biathlons. Long distance and marathon runners appear to be increasingly members of their country’s military – the U.S. Army had 11 soldiers participate in the 2016 summer Olympics in Brazil in 2016. A dearth of research on the relationship between the military and sports in a handful of areas remains and could be fruitful. Football is the dominant subject, both European and American football. Noticeably absent is the intersection of the military and women’s sports, and less prominent, individual sports such as

tennis, golf, and swimming. The existing research does span the spectrum of research methodologies, distributed mostly in qualitative research with some quantitative studies as well. Country-specific and cross-national studies are warranted.

## Emerging Genres and the Military

There are emerging genres at the intersection of the military and popular culture covered less in the literature but are worthy of explicating herein. Many of the genres may not be thought to link to the military. These topics include food, technology, graffiti, scandals, social media, toys, celebrities, and comics.

For example, for many readers, the MRE (Meals, Ready-to-Eat) is a staple link between the military and food. However, the topic covers more than MREs to include a more broad-based examination of industrial/institutionalized food that is inexpensive, imperishable, storable, and transportable (Marx de Salcedo 2015).

Today, popular culture intercedes some in the processes of adopting military technologies that blur the lines between civil and military domains (Van Creveld 1988). Many devices invented for military purposes have moved into the government and commercial sectors. Perhaps no other device originally invented for military purposes and adopted to commercial purposes is computing (Arquilla 2003). Critical reviews argue that the intersection of the civilian and military and technology is war fought via real-time networks and live-computer and television feeds viewed by all constituents concomitantly and perhaps even fought by cyborgs (Der Derian 2009). President Barack Obama is the first US President to rely increasingly on drones – aerial vehicles without physical pilots on board – for military missions and the first to use them more than manned aircraft or ground troops (Kreps 2016). Drones, sometimes called UAVs (unmanned aerial vehicles), have numerous military and civilian concerns including proliferation within and across national borders, safety, and privacy. Drones have implications for popular culture given their perceived and potential surgical implications in a military context including governmental, commercial, and private usages.

Another unlikely topic is graffiti. There may actually be a long history of military graffiti dating back to the Civil War of what one publication calls “war graffiti” – where the omnipresent and infamous, “Kilroy Was Here,” was the Banksy of his time (Bratten 2018). The late military sociologist Charles Moskos is noted for his observations suggesting should one want to understand what is on the minds of soldiers, look for their graffiti in and around the barracks.

Military scandal regularly captures the public’s attention. From sex liaisons to a range of abuses of power and white (green) collar crimes, the military as an organization is rife for misconduct and public scrutiny. The Tailhook Scandal – a U.S. Navy convention of fixed-wing pilots held in Las Vegas, Nevada, in 1991 is perhaps the most notorious military scandal in recent history. The “Fat Leonard” navy scandal is more recent (see Bakken 2020 for these and other military US military scandals).

A handful of scholars are beginning to make sense of scandals in a military context. Crosbie (2014) writes about the concept of “feedforward” in contrast to feedback, as a strategy to “get out in front” in military public discourses. Australian researchers have written about scandals in their military including a social autopsy of The Skype Affair and argue for anchoring scandals in the broader field of scandal research – scandalology (Andrews et al. 2019). Closely linked to scandal is the spectacle of celebrities in the military (Yeo 2017).

Social media will no doubt become a field for study at the intersection of the military and popular culture. Notably, Cornelius and Monk-Turner (2019) recently conducted a content analysis of military-oriented social media memes linking them to sexual harassment and assault.

From G.I. Joe action figures to Barbies in military flight suits and toy M16s and M4s, children’s toys are wildly popular and likewise are material cultural artifacts worthy of analysis (Machin and Van Leeuwen 2009). Brilliantly, Loarridge (2019) examines the cast-lead toy soldier linking it to the broader socio-political military British and German empires.

Comic strips have long been a part of the military experience. Cartoonists such as Ernie Pyle (erniepile.org2020) during WWII and Gary Trudeau’s *Doonesbury* post-9/11 have highlighted war (Barker and Sabin 2012). Similarly, superhero characters are featured in and around the military (Detora 2009).

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## Conclusion

This chapter consolidates approximately 100 social science and humanities studies at the intersection of the military and popular culture. It provides a review of a range of desperate social science and humanities studies across a scope of topics at the juncture of popular culture, the military, and war. Most studies are English language publications and are of the popular cultures and militaries of the United States and the United Kingdom. Much of the work utilizes qualitative research but scholars should not methodologically limit their future work. The review is not exhaustive, yet just over 100 sources are reviewed that are salient in the literature. By using the most recent literature, the reader should be confident they can mine the references for older and no doubt worthy shares of the canon. The studies included here coalesce around 18 distinctive topics known in the popular culture literature as genres. The genres include literature/books, film, television, mass media, music, video games, board games, fashion, photography, and sports, including the emerging genres of food, technology, graffiti, scandals, social media, toys, celebrities, and comics. No less popular culture genres with potential nascent links to the military include popular art (e.g., National Endowment for the Arts), monuments (e.g., confederate monuments and war memorials), architecture (e.g., fortifications), language (e.g., SNAFU), theatre (e.g., *A Soldier’s Play*), pornography (Berger et al. 2019), dance (Reason 2017), transportation (e.g., the Jeep and Hummer), and of course, the internet (Golan and Ben-Ari 2018).

The articles and books cogitated here are oriented in journals that are either popular culture or military prevalent such as the *Journal of Popular Culture*; *Media, War & Conflict*; and *Armed Forces & Society*. The research referenced here is laudable and can serve as foundational scholarship and/or be replicated and expanded. Similar to the popular culture field more generally, films, TV, and mass media have dominated the field. Likewise, interdisciplinary scholarship is increasingly the norm in popular culture studies and appear to be the case in popular military culture studies. Further, future research should consider combining the genres. For example, a study of the intersection of military and war with comics, music, film, and video games as popular culture – the four genres are but one permutation that could be consolidated. Moreover, scholars should consider more nuanced study within a genre to examine subgenres. For example, military comedy films or sex and gender representations in military video games. All the genres and subgenres appear ripe and fruitful for future scholarship in the subdiscipline of military popular culture studies.

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## Cross-References

- ▶ [Civil-Military Relations: What Is the State of the Field](#)
- ▶ [Dynamic Intersection of Military and Society](#)

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# Civil-Military Relations: What Is the State of the Field

David Pion-Berlin and Danijela Dudley

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## Abstract

In the study of states and societies, civil-military relations ought to occupy a central position. It is only the armed forces that can provide for a nation’s defense and at the same time are capable of overturning that nation’s government. These dual powers are extraordinary and can constitute both an essential coercive asset and a potential threat to governments and citizens that must be neutralized. The goal of any state is to harness military professional power to serve vital national security interests, while guarding against the misuse of power that can threaten the well-being of its people. To face this challenge, governments must be properly equipped and motivated to lead, militaries must be sufficiently subordinate to

D. Pion-Berlin (✉)  
University of California, Riverside, CA, USA  
e-mail: [david.pion@ucr.edu](mailto:david.pion@ucr.edu)

D. Dudley  
San Jose State University, San Jose, CA, USA  
e-mail: [danijela.dudley@sjsu.edu](mailto:danijela.dudley@sjsu.edu)

civilian rule, and societies must better understand what roles the armed forces should and should not play. The rich literature on civil-military relations addresses these topics, and much more. In fact, the subfield is vast, and no single essay can do it justice. To simplify the task, we have focused on four essential elements: military coups, democratic transitions, civilian control, and military-societal relations. Within each of these topics, discussion will be limited to what are, in our view, some of the key scholarly works on the subjects.

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**Keywords**

Civil-military relations · Civilian control · Military · Coup d'état · Military-society relations

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**Introduction**

Armed forces ultimately exist to protect society from outside threats. Often, however, militaries overstep this role and become political actors, undermining the system they are intended to protect. The challenge for governments is therefore to establish armed forces capable of protecting the state while at the same time refraining from use of their military power to determine political affairs of that state. This challenge forms the central focus of the field of civil-military relations. At the core of this are questions of military's proper role in the society, its appropriate level of political influence, and the means by which to achieve a balance. In addressing these questions, we focus on four essential elements of the field of civil-military relations: military coups, democratic transitions, civilian control, and military-societal relations.

Military coups have long been at the heart of the field of civil-military relations as they represent an ultimate symbol of military insubordination to civilian authorities. When armed forces overthrow civilian authorities from power, they become critical arbiters of political contests and processes, whether they assume leadership positions or transfer powers to new authorities. As such, understanding the circumstances and causes of military coups is often seen as the central challenge of civil-military relations.

However, while overt intervention against the government represents the most extreme means of military's intrusion in politics, the armed forces may undermine civilian authority in subtler ways; by defying orders, challenging decisions, and using formal and informal channels to exert undue influence over policymakers, the military may expand its political reach and impair the government's ability to exercise its political prerogatives. As a result, scholars ask how governments can exert civilian control over the armed forces without undermining their capacity to defend the country? We answer that question by focusing on four factors often emphasized in the literature: beliefs, context, institutions, and agency.

The process of establishing democratic control over armed forces is particularly complex during democratic transitions. Emerging democracies must not only

survive the military's potential to disrupt the process of democratization, but they often must redesign the military's role in the society, establish a proper distribution of power between soldiers and civilians, and develop institutional structures for effective oversight of the defense establishment. While these may be challenging tasks for any country, they are particularly difficult in incipient democracies with underdeveloped democratic institutions and legacies of nondemocratic civil-military relations.

While the field of civil-military relations often focuses on the relationship between civilian leadership and the military institution, the broader relationship between the armed forces and the citizenry is just as essential in understanding the military's role in a society. To what extent are the interest and preferences of the government, the military, and the society aligned? To what extent does the military resemble the society it is intended to protect? Answers to these questions may affect whether a military chooses to identify with the public or with the government if the two are opposed to each other and may ultimately affect political outcomes.

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## Military Coup

A military coup d'état is the most extreme manifestation of military intervention in politics. Militaries in both democratic and authoritarian states have overthrown governments they were intended to serve, either seizing power themselves or transferring power to new authorities. While arguably most militaries have the ability to overthrow their civilian rulers at any point in time, they do so only when a number of elements align. The soldiers must be motivated to topple their government and the conditions must be favorable to allow them to do so with least resistance and most support. This section explains four elements essential in understanding military coups and their occurrence: what motivates military coups, under which conditions will the armed forces opt to topple their rulers, what is needed to execute a successful military coup, and which preventive measures can the government take to reduce the likelihood of military coups.

One of most commonly offered explanations of military's motivation to intervene in politics is the interest of the military organization and its members. In *Soldiers in Politics: Military Coups and Governments*, Nordlinger (1977) argues that "by far the most common and salient interventionist motive involves the defense or enhancement of the military's corporate interests" (pp. 63–64). Such interests of the military include the satisfaction with the budgetary support it receives from the government, preservation of its autonomy from civilian interference, and the lack of threat to the military institution by competing rivals such as militias under civilian control. Threat to any one of these interests can provide the military with sufficient incentive to enmesh itself in the political processes of the country and even to overthrow the government whose actions have endangered its corporate interests. While acknowledging that military's corporate interests often play a role in its decision to intervene, Finer (1962) argues that individual interests of soldiers can also serve as a motive for

intervention, ranging from a desire to be a part of an important event, to receive higher pay, or to advance up the promotion ladder.

But the threat to military interests can be less direct and still motivate the military to overthrow the government it is supposed to serve. If the military personnel identify with a particular socioeconomic class or region, the armed forces might topple the governing elites if they perceive interests of that class or region to be threatened (Finer 1962; Huntington 1968; Nordlinger 1977; O'Donnell 1986). Based on Latin American experiences, Nordlinger (1977) demonstrated that the armed forces mainly identified with the middle class, and would intervene to protect its interests as well as its own, in the face of challenges from the lower classes. Similarly, O'Donnell (1986) argued that societal changes brought about by rapid modernization lead to political and economic instability and high levels of class conflict, affecting the interests of middle class soldiers. Huntington (1968) agreed that the military intervenes on behalf of the middle class, either by toppling oligarchies to permit the middle class to enter the political arena or populist governments whose policies endanger the interests of the middle class. Finally, Finer (1962) went beyond class interests in arguing that the military as an institution which identifies with national interest might feel obligated to overthrow the government whose actions seem to threaten the interests of the nation.

While government's actions that adversely affect the military organization and its members may incentivize soldiers to intervene, this is unlikely to occur unless the circumstances favor a military intervention. The question of when the military will act on its interests and take extreme steps to protect them requires a look outside the military organization and into the broader societal conditions. As Huntington (1968) pointed out, "the most important causes of military intervention in politics are not military but political and reflect not the social and organizational characteristics of the military establishment but the political and institutional structure of the society" (p. 194). Scholars have identified the government's loss of legitimacy as the most important context in which militaries may turn to coups (Belkin and Schofer 2003; Huntington 1968; Nordlinger 1977).

The loss of legitimacy by the ruling elites challenges their right to continue to govern and provides an opening for the military to translate its interests into actions by generating public support for military intervention. While the actual act of toppling the government may be performed by a small number of individuals, "normally the support of a fairly large proportion of the total number of political actors in the society is achieved before the coup is launched" (Huntington 1968, p. 219). Such support is likely to be gained when government performance failures manifest themselves in constitutional violations, persistent economic crises, and pervasive violence and disorder in the country (Nordlinger 1977). As Huntington (1968) pointed out in *Political Order in Changing Societies*, "military intervention is thus usually a response to the escalation of social conflict by several groups and parties coupled with the decline in the effectiveness and legitimacy of whatever political institutions may exist" (p. 216). A military coup under such circumstances serves to reduce societal tensions and put a stop to violence by removing from power the object of popular discontent.

In addition to government legitimacy, Belkin and Schofer (2003) argue that the history of successful coups and the strength of civil society can also explain the incidence of coup attempts. A history of successful coups increases coup risks while a strong civil society acts as a brake against military coups; an organized public will openly resist illegitimate overthrows of civilian governments. This focus on weak civil society as a facilitating condition of coups echoes Luttwak's (1969) argument that "The social and economic conditions of the target country must be such as to confine political participation to a small fraction of the population" (p. 24). In his seminal work *Coup D'état: A Practical Handbook*, Luttwak argued that the lack of political participation among the general population, political independence of the state, and centralized state power are three core requirements for the military to execute a successful coup because they allow a relatively small number of military personnel to efficiently seize power without provoking much resistance from the general public.

While motives and opportunities may translate into a coup attempt, its success will largely depend on the capacity of coup participants: unity, secrecy, and organization, must all align to result in a successful ouster of the existing authority. According to Nordlinger (1977), it is essential that the military be unified in its agreement that a coup is necessary, that "strategically situated, middle-level troop commanders" (p. 102) be actively involved in the coup, that the military possesses sufficient troops to take over key positions, and that it acts quickly and in a coordinated manner in order to surprise the government. Singh (2014) adds another necessary element: the ability of coup participants to convince other armed elements that the coup will succeed. Considering military coups as coordination games, Singh argues that if coup participants are able to assure potential opponents that the coup is widely supported, it becomes a self-fulfilling prophecy: different groups and individuals join in support because they don't want to be on the losing side. Luttwak agrees – the success of any coup rests on the participants' ability to turn key armed sectors into active participants of the coup and to neutralize other military, police, and security agencies. Political opposition, surprisingly, does not have to be neutralized at the onset of a coup; because political forces do not present a physical threat to coup participants, their opposition can be defused in the immediate aftermath of a successful coup (Luttwak 1969, p. 51).

Military motivations and structural conditions of the society are not sufficient to guarantee a successful toppling of the existing authority, because governments that face high levels of coup risks have developed coup-proofing strategies. James T. Quinnivan (1999) demonstrates how Middle Eastern authoritarian governments have successfully used five coup-proofing strategies: taking advantage of family, ethnic, and religious allegiances by strategically building support among crucial groups; creating parallel military forces loyal to the government, with the purpose of protecting the leadership against a possible military intervention; establishing various security agencies in charge of overseeing different security sectors, possible opposition, as well as each other; promoting and enhancing military professionalism; and committing enough resources to fund not only extra military and security agencies but to offer rewards for loyalty to the ruling elites. While the author

demonstrates that these strategies have reduced the likelihood of military coups in Saudi Arabia, Iraq, and Syria, he also recognizes that they have also had negative effects on these states' military readiness and expertise by diverting funding and delaying modernization of the regular armed forces.

Other scholars have similarly identified the division of armed forces into rival organizations as a common coup-proofing strategy used by authoritarian leaders (Belkin 2005; Belkin and Schofer 2005; Stepan 1971). Belkin and Schofer (2005) argue that a divide and conquer strategy, which involves a creation of additional armed services such as new military branches or paramilitary and intelligence agencies, diffuses military power and offers governments a safeguard against a possible coup risk. "Counterbalancing is the only strategy that pits force against force, and alternative strategies that leaders use to minimize the risk of a coup can be quite ineffective" (Belkin and Schofer 2005, p. 150). They, however, go a step further and argue that since even divided militaries may collaborate against the governing elites, the leaders may engage in or aggravate international conflicts to "drive wedges between different branches, further reducing the risk of military coup" (p. 151; see also Belkin 2005). Scholars have disagreed, however, on the extent to which international conflicts serve to reduce the likelihood of coups. While Desch (1999) would agree that external threats lead to higher levels of civilian control over military, Finer (1962) argued that both international and domestic conflicts lead to the governments' dependence on the armed forces, increasing the influence of the military and thus its opportunity to intervene in politics.

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## Civil-Military Relations and Democratic Transitions

The issue of civil-military relations is particularly significant during democratic transitions as it poses challenges that can greatly affect both the outcome of the transition process and the quality of the democratic system that emerges. States undergoing regime transition face two distinct challenges in the realm of civil-military relations. First, they must neutralize the military's potential to disrupt the democratization process. If the armed forces are threatened by political and social changes and their effects on the security establishment, they may derail the process or halt it altogether. Second, transitioning societies must not only reform their political systems but must carefully redefine civil-military relations. As any transition ought not be considered complete until the armed forces have been placed under the control of democratically elected civilian authorities (Barany 2012; Karl 1990), it is essential that transitioning countries redefine the role of the military, its levels of autonomy, eliminate the military's political prerogatives, establish a proper distribution of power between civilian and military authorities, and develop institutional structures for democratic control over armed forces if their democratic endeavors are to succeed.

According to Cottey, Edmunds, and Forster (2002b), the process of establishing democratic civil-military relations in transitioning societies proceeds through two generations of reforms. During the first stage, the establishment of formal

institutional structures for democratic oversight over the defense sector launches the process of reforming civil-military relations and provides a foundation for the second stage during which those institutions are strengthened and implemented through capacity-building, through strengthening democratic civilian control of defense policy and democratic governance. However, the first generation reforms can only be undertaken if the military allows the transition to take place by refraining from intervention. As a result, the first stages of transition should be marked by reducing military political prerogatives, removing it from the political arena, and lessening its inclination and capability to intervene through a rudimentary legislative framework (Pion-Berlin and Martínez 2017; Serra 2010). Only after the threat of military intervention has been neutralized can the government focus on strengthening institutions for democratic control over the armed forces and defense policy, which usually occurs during the phase of consolidation.

Thus, the primary challenge transitioning countries face is preventing the armed forces from disrupting the process of democratization. A threat of a military coup, undue influence over domestic and foreign defense policies, use of entrenched positions to prevent political and economic reforms, and obstruction of human rights prosecutions are some of the means by which the military may undermine and alter the outcome of democratic transition. Such a threat is particularly acute in countries emerging from military-dominant regimes. As the outgoing ruling elites, the armed forces will use their power to negotiate favorable transition conditions (Burton et al. 1992; Geddes 1999; Geddes et al. 2018; Karl 1990; O'Donnell and Schmitter 1986; Whitehead 1986), and if they can't secure satisfactory terms they may halt the reforms altogether. At this point, the balance of power between the civilians and the military will define the role of each side in the transition process (Agüero 1995, 2001; Arceneaux 2001; Barany 2012).

The balance of power between civilians and the military during regime transformations will greatly be affected by the nature and the level of success of the outgoing authoritarian regime. As Craig Arceneaux (2001) puts it, "transition control is determined long before the actual transition from military rule to democracy occurs" (p. 13). Focusing on Latin American transition experiences, Arceneaux finds that officers are in a better position to negotiate favorable transition terms if their rule was marked by military unity and strategy coordination. While unity provides the armed forces with a stable basis of support and allows them to fend off challenges from the opposition, strategy coordination produces a consistent economic and political agenda, reducing the emergence of challenges altogether. Where both factors are present, the military is able to exert control over the transition process and its outcome, leading to a democratic system to a large extent designed by the outgoing military elites.

Felipe Agüero (1995) similarly focuses on the nature of the previous regime but argues that the level of military empowerment during authoritarian rule and the mode of transition are essential in explaining its bargaining strength in the transition process. Where civilians managed political decisions, even if the military occupied important positions within the government, the military was not able to set the transition agenda and dictate policy reforms. If on the other hand the officers directly



crafted public policy and determined successions of the executive, they were also more likely to dominate the transition process. This empowerment of the military is further reinforced in states undergoing a planned transition introduced incrementally by the outgoing authoritarian elites. When, however, a regime suffers an unanticipated collapse as a result of domestic uprising or a military defeat, civilian authorities are more likely to take charge, thus dictating the terms and the timing of reforms and limiting the range of options for the former ruling elites (Agüero 1995).

Barany (2012) similarly finds that a defeat in a major war is more likely to result in a successful democratization of civil-military relations and of the political system in general, as it decreases the legitimacy of the old elites and increases the leverage of the incoming democratizing forces. In his comprehensive study of 27 countries across six different contexts, Barany concludes that democratization of civil-military relations is also facilitated by the European setting and the legacy of communist one-party rule. In line with other scholars who have found that prospects of NATO and European Union membership have provided additional incentives for democratization of defense establishments (Betz 2004; Cottey et al. 2006; Epstein 2005, 2006; Matei 2013; Serra 2010; Vankovska and Wiberg 2003), Barany finds that the European context in both former communist and military-dominant regimes created conditions conducive to democratization of civil-military relations. The prospect of international integration encouraged the states to establish democratic institutional structures, and their militaries were motivated to reform, professionalize, and turn their attention to external missions.

The Central and Eastern European context provided an additional safeguard against military intervention during the transition process: the legacy of communist rule (Barany 2012; Cottey et al. 2002c). In contrast to former military-dominant regimes, Eastern European armed forces did not pose a direct threat to emerging democracies because of their history of subordination to civilian authorities. By practicing subjective civilian control in Huntington's sense (Herspring 1999), the ruling elites of communist states maintained firm control over their armed forces through political indoctrination of the ranks, resulting in their unconditional allegiance to the Communist party and its ideology. Because the militaries were conditioned to be subordinate to civilian leadership, democracies emerging from communism did not face praetorian threats from their armed forces and civilian supremacy was not contested. As a result, in *Politics and the Russian Army*, Taylor (2003) concludes that the organizational culture of the Russian armed forces prevented military intervention during the period of political transition and state transformation, even when opportunities and motives for such interventions were present.

The level of violence and human rights abuses committed during an authoritarian regime is another important factor in explaining the military's determination to obstruct the process of democratization. High levels of violence during authoritarianism, especially if committed by the military, will lead to more resistance to transition due to increased fears of human rights trials. Threatened by the transition, the officers "will strive to obtain iron-clad guarantees that under no circumstances

will ‘the past be unearthed’; failing to obtain that, they will remain a serious threat to the nascent democracy” (O’Donnell and Schmitter 1986, p. 29). Despite this threat, ignoring the issue of accountability may undermine the legitimacy of the new democracy (O’Donnell and Schmitter 1986; Serra 2010) and may empower the military by instilling a sense of invulnerability (Rouquié 1986). As a result, the new democratic rulers must carefully balance the need for justice with the need to keep the army in the barracks. To that end, Barany (2012) recommends “strategic compromises” which avoid drastic actions against the armed forces and take into account both the timing of reforms and the need for accountability (p. 351).

Preventing the soldiers from obstructing the process of transition is just one challenge of democratizing civil-military relations. The militaries must be reformed, and civilians must have the will and the capacity to carry out the necessary reforms. According to Serra (2010), a successful transition requires not only the reduction of military autonomy and its political prerogatives, but also the lessening of societal conflict, which if persistent can strengthen the armed forces. Additionally, the military profession must be reformed to coexist within a democratic context (Serra 2010). The nature of military reforms, however, differs in countries emerging from military-dominant and civilian-dominant one-party regimes. In post-military regimes the priority is removal of soldiers from the political arena; in post-communist states, on the other hand, the main challenge is removal of politics from the armed forces (Barany 1997, 2012). While soldiers in one-party communist systems tend to be subordinate to civilian authorities, they are at the same time deeply politicized, loyal solely to the Communist party whom their career advancements depend on (Betz 2004; Cottey et al. 2002a; Herspring 1999). As a result, Danopoulos and Skandalis (2011) find that Albania’s newly democratized government prioritized four aspects of military reform: depoliticization, departization, democratization, and professionalization.

Another particularly challenging legacy of both civilian- and military-dominant authoritarian systems is the lack of civilian competence in defense matters. As has been recognized by civil-military relations scholars, at least some level of knowledge of and expertise is required if civilians are to take charge of security and defense policies (Bruneau 2005; Bruneau and Goetze 2006; Gibson and Snider 1999; Giraldo 2006; Pion-Berlin 2009). As even some established democracies still continue to struggle with the lack of civilian expertise in defense matters (Pion-Berlin et al. 2019), transitioning societies are even more likely to face the problem of uninformed civilian officials, leading to their dependence on military guidance on defense issues. In addition to affecting the trajectory of political reforms, O’Donnell and Schmitter (1986) demonstrate that such deference to the officers can reinforce the military’s image of itself as guardians of the national interests. If civilians continue to defer under the pressure of uncertain developments brought on by the transition, they will reinforce these sentiments, endangering further the process of democratic completion.

## Civilian Control

There are numerous approaches to the topic of civilian control – too numerous in fact to review them all. This chapter will confine itself to four important ones: beliefs, context (historical and political), institutions, and agency. These are the themes that crop up most persistently in the literature. The central dilemma facing all governments is how to maximize their political power over the military so that it serves the interests of the government, while allowing the military to perform well, professionalize, and conduct the missions assigned to it. The military instrument is a potent one, and it must be utilized carefully so that it furthers the defense and security interests of the nation without jeopardizing the political system it is a part of. Unlike the United States and many European countries, relations of power are not completely settled in vast parts of the developing world. Militaries contest policy and policymakers, exert pressure outside of official channels, and in worst case scenarios, topple governments. So governments in developing countries must learn how to curb military political influence while preserving or enhancing military professionalism. This is the challenge of civilian control.

## Beliefs

Scholars agree that civilian control is made easier where there is a military belief in political obedience. This can be attributed to long periods of professionalization, where through educational indoctrination, soldiers have internalized the concept of obedience to political authorities (Bruneau 2005; Finer 1962; Fitch 1998; Huntington 1957; Pion-Berlin and Martínez 2017; Taylor 2003). As S.E. Finer said, the armed forces will not intervene when they *believe* in the principle of civil supremacy. Principles get reinforced from one generation of military students to the next, and lessons learned are not forgotten as officers climb through the ranks. When principles become deeply embedded within the military, there develops an internal, organizational culture of respect for political authorities and rejection of insubordinate behavior (Taylor 2003). By the same token, ideas favoring intervention and coup d'états can be reinforced across generations, becoming elements of an alternative organizational culture.

In *The Armed Forces and Democracy in Latin America*, Samuel Fitch (1998) demonstrated that while core professional values regarding hierarchy, discipline, and expertise (Huntington 1957) remain unchanged, role beliefs do not. Role beliefs are “military conceptions of their role in politics” (p. 61), and the “proper relationships between civilian authorities, the armed forces, and society” (p. 61). Those officers who embrace a “democratic professionalist” mindset believe they should stay out of politics, and fully comply with government orders handed to them. Alternatively, officers who subscribe to a set of beliefs known as “conditional subordination” maintain that in crisis situations – where national interests are imperiled – they have the right to intervene.

Militaries subscribe to different ideologies which affect their judgments about incumbent regimes and the wisdom of military intervention. During the Cold War, in Latin America, Asia, and Africa, anti-communist and counter-revolutionary doctrines often shaped military views. Fearing that elected governments were not up to the task of defeating left-wing insurgencies, militaries seized the reins of power themselves. Then and today, developmental doctrines have been important components of military thought. The military has been called upon to play a role in development projects (building infrastructure, schools, hospitals, etc.), as well as to relieve hardships and respond to immediate material needs of disadvantaged populations (food distribution, health provision, housing, etc.). Is this detrimental to civilian control? It depends. According to Pion-Berlin (2016a) in *Military Missions in Democratic Latin America*, threats to civilian control are minimized if the military's development role is carefully circumscribed, prohibiting officers from occupying positions of political and fiscal authority, and assuring that government or outside agencies exert oversight. However, civilian control could be adversely affected if the military's developmental role becomes so significant that governments come to depend on soldiers who cash in on that dependency by demanding a say on policy matters.

## Context

The values that are learned and relearned within the military are affected by the larger political context surrounding the military institution. Professionalization on its own may *or may not* induce norms of compliance. For Samuel Huntington (1957) it did, and his concept of objective control is foundational to the field. Military institutions, he claimed, become increasingly subordinate when left to their own devices to modernize, professionalize and in that matter, become politically neutral. In the U.S., part and parcel of that process was the cultivation of a military mind-set that was dismissive of societal trends, contemptuous of politicians, and yet committed to remaining nonpartisan and obedient.

This is a curious blend that has often been absent in developing societies. In fact, the more familiar pattern is one where a professionally qualified yet aloof military convinces itself that it is in many respects superior to the political elites and thus more capable of governing than they. *Hence, professionalism may actually set the stage for military intervention.* In the late 1800s and early 1900s, Latin American militaries became more professional largely thanks to counsel from military missions sent from Europe. But like the Europeans – indeed because of them – Latin American military establishments acquired deep distrust of, if not contempt for, civilian authorities. According to the work of Frederick Nunn (1983) and Brian Loveman (1999), military professionals advocated a form of professional militarism, viewing governments of that era as incompetent and corrupt while seeing themselves as more capable and ethical. Hence, with professional upgrading came improved self-image, and officers increasingly believed they could manage the affairs of state

better than the politicians themselves. Eventually, many militaries would seize state power to prove they were up to the task.

If officers are convinced they are superior to politicians, they may still refrain from intervening if civil society is resolutely committed to defending the political order against efforts to overturn it. As S.E. Finer argued in his classic text, *Man on Horseback* (1962), widespread public approval for legitimate procedures of transferring power and agreement on who has sovereign authority act as a constraint against coercive modes of influence. The military will choose noncoercive actions compatible with the prevailing political order. Conversely, when the public loses faith in the legitimacy of government, this can set the stage for military intervention, as Alfred Stepan (1971) persuasively showed in *The Military in Politics: Changing Patterns in Brazil*. Militaries, he argued, often gauge public sentiment before toppling regimes, to make sure that a sizeable portion of the public is behind them.

National cohesion is another component to context. How unified or divided is a nation? (Dudley 2016; Mietzner 2014; Shah 2014; Wilkinson 2015). When nations are polarized between competing parties, factions, and groups, the instability that results can invite military intervention, as scholarship on India and Pakistan illuminates. Though they share the same heritage – both products of British colonialism and officer training – the Indian military has remained firmly subordinate to civilian control since the nation's birth, whereas the Pakistani military has intervened repeatedly to topple democratic governments. What explains the difference? Aqil Shah (2014) in *The Army and Democracy: Military Politics in Pakistan* argues it has much to do with national divisions and party politics. Pakistan failed to overcome serious ethnic, regional, and religious divides because the ruling party enforced a single language on a nation with linguistically different subregions. This only fueled anger and conflict, sharpening the military perception that civilians were not capable of governing. By contrast, Steven I. Wilkinson (2015) in *Army and Nation: The Military and Indian Democracy Since Independence* demonstrates how in India, The Congress Party incorporated many different ethnic groups, thus generating cross-cutting cleavages and avoiding sharp ethnic polarization and disenfranchisement that could have drawn the military in.

## Institutions

The third approach to the study of civil-military affairs is institutional. Institutionalists put their stock in organizational designs which can either define barriers to entry or ease access for soldiers who would attempt to unduly influence policy. As Croissant et al. (2013) have said, “institutions define power relationships and hierarchies, empowering some actors while closing channels of power to others” (p. 47). Military behavior would be subject to laws, rules, and procedures embedded within an institutional setting that could either enhance its influence or diminish it. In the USA, the framers were more concerned about concentrated power in the hands of a civilian despot than they were about power in the hands of a military still in its nascent stages of development (Huntington (1957). For them, the solution was to

divide control of the armed forces between the federal government and the states, and between the executive and legislative branches. Unfortunately, this allowed the military to play off one center of civilian power against another. In Huntington's view (1957), civilian control has remained strong only because of US geographical isolation and international balances of power.

More contemporary scholars have followed up on Huntington's interest in institutional arrangements. Deborah Avant (1994) argued that unified political institutions in Great Britain facilitated civilian intervention to shape military doctrine, allowing it to adapt to changing threats, whereas divided institutions in the USA ceded greater autonomy to inflexible military planners who failed to respond to changing circumstances. Pion-Berlin (1997) explained how the ability of the armed forces to exert pressure on Argentine policymakers depended on how concentrated (or dispersed) decision-making authority was, and how insular (or vulnerable) decision-makers were. High levels of concentrated authority and autonomy within the democratic state allowed civilians to design and execute policies more easily because the military would have fewer intragovernmental divisions to exploit. Conversely, dispersed authority and low autonomy forced policymakers to navigate more decision points from execution to implementation, affording the military numerous avenues of influence.

If there is one institution that represents the keystone holding up the arch of civilian control, it is the defense ministry (Bruneau and Tollefson 2006; Edmonds 1985; Pion-Berlin 2009). As Bruneau and Goetze (2006) say, the ministry "has become widely viewed as the best solution to the classic paradox, 'Who guards the guardians?'" (p. 71). The purpose of the defense ministry is to prepare the armed forces to serve the policy goals of government and act as a buffer zone between the president and the service branches. Should active duty or retired military officers occupy too many top positions within the defense sector, they may exhibit divided loyalties, exert undue influence, dominate defense and security policymaking, and crowd out alternative viewpoints, according to a number of scholars (Bruneau and Tollefson 2006; Pion-Berlin 2009). A proper ministerial buffer means one with a sizeable presence of civilian leaders to ensure that policy preferences get translated into defense actions and to stand vigilant against military efforts to push an armed forces agenda at the expense of a national agenda.

## Agency

The final approach has to do with agency: the difference that individuals make as they operate within contexts and institutions. Scholars often conclude, appropriately, that agency is possible, but that the range of options available to the decision-maker to effect changes in the armed forces is constrained by her unique environment. Civilians who want to reduce the political power of the military and insure its cooperation in the development of defense policy must have some knowledge and strategies for doing so. A few prominent scholars have investigated this issue. Alfred Stepan (1988) in *Rethinking Military Politics* argued that achieving civilian control

involved a process of reducing military contestation and prerogatives. He delimited 11 important areas where military power had to be cut back, ranging from its participation in the cabinet to its role in internal security, policing, state enterprises, intelligence gathering, etc. While he provided ordinal measures for these prerogatives delineating low, moderate, or high scores for each, he also treated all prerogatives equally, with no suggestion as to how democratic leaders might sequence their selection of prerogative-reducing strategies.

Narcís Serra (2010) in *The Military Transition* based on the Spanish case proposed one solution to this problem. He differentiated between measures that ought to be taken during a period of democratic transition, from those taken during consolidation. During the transitional phase, emphasis is placed on limiting the military's proclivities for intervention and extracting the armed forces from policy processes and spheres of influence. Then, policymakers could turn their attention to crafting military and defense policies, and strengthening institutions such as the defense ministry, during the consolidation phase. Serra's approach bears resemblance to Cottey et al. (2002b) who distinguished between first and second generational problems.

Peter Feaver (2003) greatly advanced the study of civil-military strategic interaction in *Armed Servants: Agency, Oversight and Civil-Military Relations*. Using a Principal-Agent theoretical framework, Feaver demonstrates how civilians (principals) can overcome the vexing moral hazard of losing some control once they delegate defense and security tasks to the military. They reduce the chance of military shirking via a range of monitoring strategies backed up by sanctioning, affording civilians the ability to punish the military for avoiding its duties. This is a more intrusive form of control, where civilians break through the stiff barrier that Huntington had set up between politicians and soldiers. In a similar vein, Eliot A. Cohen (2002) argues that in wartime, political leaders have the right to prudently intrude into the military sphere, because battlefield decisions have political consequences.

Croissant et al. (2013) in *Democratization and Civilian Control in Asia* follow up on Feaver's work by broadening the concept of control strategy while contextualizing its use. Civilians can resort to monitoring and sanctioning – what they describe as a robust power strategy – but *only* in a context that affords them ample resources and opportunities (p. 51). Civilians with scant resources and fewer opportunities may have to settle for weaker forms of control, relying either on legitimization strategies which alter military norms or compensation strategies that attempt to purchase military compliance via rewards. This framework borrows from Trinkunas' (2005) model in *Crafting Civilian Control of the Military in Venezuela: A Comparative Perspective*. He identifies four strategies civilians have relied upon to develop leverage over the armed forces: appeasement, monitoring, divide and conquer, and sanctioning. The choice of strategy is conditioned (but not determined) by the breadth or narrowness of the opportunities availed to civilians in the aftermath of transitions from authoritarian rule. Policymakers have more room for maneuver when armies are fragmented while civilian elites are unified. But Trinkunas argues that agency is critical, because while some policymakers take advantage of their wide opportunities, others do not.



## Military-Society Relations

When civil-military relations are analyzed, they are most often linear – restricted to discussions on the interaction between armed forces personnel and government officials. That comes at the expense of the broader, triangular relations between the soldiers, politicians, and society (Serra 2010). Every nation has to, at some point in its history, come to grips with achieving a more enduring harmony between those three elements. The Prussian theorist Carl von Clausewitz (1780–1831) referred to this as the “Great Trinity,” the essential ingredient to fighting successful wars. Political theorists have since contended that in peacetime too, there should be an alignment between a government’s military policy, the military itself, and societal interests (Burk 1998). This is a point of view originally put forth by the sociologist, Morris Janowitz (1960) who claimed that armies should and would adopt features of society, mirroring its attitudinal, occupational, and professional traits.

In the contemporary world, how important is it that there be a connection, and mutual understanding and respect between society and its armed forces? Feaver and Kohn’s (2001) study discovered problems with the US military-societal relation, most notably a civil-military attitudinal gap featuring sizeable differences in partisan attachments and ideology between military leaders compared to nonveteran civilians and the general public. The military had increasingly aligned itself with the Republican Party and conservative ideology to a degree not seen within the American citizenry. A follow-up study of the army conducted a decade later by Jason Dempsey (2010) confirmed there was a gap but of a different kind. Senior officers identified with Republicans much more than junior officers and enlisted soldiers, but the political preferences of the lower ranks did not differ much from the general population. In the aggregate, the gap was still present, but appeared to be closing.

But are differences between elite officers and civilians a function of military culture or demographics? The US Army, for example, is more male, white, wealthier, and more highly educated than the general population – traits that may skew its ideology and party ID. To control for this Jason Dempsey’s study (2010) took a stratified sample of civilians that mirrored the army’s demographics. Sizeable differences still emerged between the civilian sample and army *senior officers* which could not be explained by demographic traits. Are they explained by army identification? Dempsey could not confirm that either, and more research is warranted.

Be that as it may, do military-societal differences matter? Rahbek-Clemmensen et al. (2012) argue that gaps are not the same as crises. Large gaps may result in no crises at all, whereas smaller gaps may be of the kind that do generate crises. For example, it has been found that the military has a certain contempt for societal mores. But so long as it abides by its professional duties in defending the nation, such a gap in cultural attitudes may have no detrimental effects.

If there is one *potentially* harmful gap, it is the breach between society’s admiration for the armed forces and its understanding of it (Schake and Mattis 2016b). The US public is both enamored with the military and ignorant about it, while at the same time considerably distrustful of political leaders. A citizenry seduced into what Andrew J. Bacevich (2005) calls a new American militarism is one that accepts,



indeed invites, misguided notions that the military should be a nation's number one problem solver. In a study based on a 2014 survey of Americans, half of those nonveteran civilians polled think military rather than political goals should determine the application of force, and a strong majority (83%) believe a civilian government should let the military take over running a war (Golby et al. 2016, p. 112). These sentiments run counter to every principle of civilian control, reflect the public's lack of knowledge about civil-military affairs, and can tempt political leaders to make poor foreign policy decisions.

When an unknowing public wants the military to be more influential, it creates an atmosphere where politicians would rather align with public sentiments than lead, by deferring to those admired generals. Accordingly, more resources flow to the defense budget to pay for military personnel while leaving the diplomatic corps and State Department depleted of funds (Brooks 2016). The tendency is for civilian policymakers to "rely on the credibility of their military commanders to garner support for their policies" (Schake and Mattis 2016a, p. 302). This then "creates perverse incentives for senior officers to use the threat of public opposition or resignation to extract policy concessions from elected officials" according to Golby, Cohn, and Feaver (2016, p. 134). Political leaders will allow themselves to be led by an increasingly assertive military. The irony is that all this may eventually erode the military's fine standing with the public if it is perceived to be too political.

Latin America is one part of the world where the military has for too long been demonstrably political, often at the expense of democratic rule. Studying civil-military relations and democracy in Latin America, Pion-Berlin and Martínez (2017) argue there needs to be a greater convergence between the armed forces and society that centers on the military's increased respect for core democratic values and institutions. Convergence is hard to come by, because soldiers are physically, institutionally, and attitudinally walled off from society, adhering to their own standards and norms which may collide with those of society. Again, the question can be asked: does it matter? The answer in the Latin American context is yes. Isolation has often reinforced an attitude of superiority among officers, exhibiting contempt for politicians who are perceived as less capable of managing the affairs of state than they. From there it was often just a short jump to the conclusion that officers should take charge of governing. Though the threat of coup is much lower today in Latin America than in the past, scholars agree that society must be vigilant in defense of democracy, and the military must take steps to conform to democratic rules of the game.

In any country, tearing down the walls separating military from civil society is a process whereby soldiers and civilians come to better understand, value, and respect each other. Moskos and Wood (1988) urged armies and societies to forge links, calling this an "external integration" of the armed forces. One such link is through education. Donald A. Downs and Ilia Murtazashvili (2012) argue that civilian students must open their minds to the value of duty, discipline, and sacrifice, while cadets steeped in the culture of hierarchy and command could stand to broaden their intellectual outlook, sharpen their critical thinking, and appreciate the value of a liberal education. This convergence ought to occur on campuses because the authors

argue the university “is a microcosm of civil-military relations. . .” (p. 31). Their goal is to integrate a military perspective into education, not to promote one, and can be accomplished through programs such as the ROTC. On balance however, these authors do seem more concerned with overcoming civilian educational deficits than military ones.

How convergent or divergent are military-society relations can have serious repercussions for regime survival. Civil-military scholarship on the Arab Spring and its aftermath has brought into sharp relief just how critical the military is to the fate of popular uprisings against autocratic regimes, and to the fate of the besieged autocrats themselves (Albrecht et al. 2016; Barany 2016; Bellin 2012; Croissant et al. 2018; Lutterbeck 2013; Pion-Berlin 2016b; Pion-Berlin et al. 2014). A military has choices: it can remain loyal to the authorities by repressing the opposition; it can stay quartered and remove itself from the political maelstrom; or it can defect by either joining the protests or overthrowing the regime. Scholars demonstrate that the decision rests on military’s institutional traits and distinct ties to the regime, its strategic calculations based on corporate self-interest, the size and breath of a mobilized public, and the military’s links to it (Barany 2016; Bellin 2012; Pion-Berlin et al. 2014).

A patrimonial military is one whose ranks are filled with soldiers recruited based on ethnic, tribal, religious, or familial identities which closely match those of the ruling elite. In that case, the military will be deeply invested in the regime’s survival and prepared to suppress the opposition (Bellin 2012). A more professional force chosen on meritorious criteria and attentive to its own corporate interests could decide to withhold its support of the regime. In every case where a president (and his government) has fallen from power as a consequence of a civilian uprising, the armed forces had refused his pleas for assistance (Barany 2016; Pion-Berlin 2016b).

Larger, broad-based, nonviolent protests invite autocrats to call for a decisive military response, but at the same time cause the armed forces to deliberate, often questioning the wisdom of the order (Bellin 2012). The application of brute force could lead to massive bloodshed, harming the military’s reputation. Soldiers on the frontlines may balk at the orders, and senior officers not wishing to invite a breach within the ranks may decide the best course of action is to resist repression orders for the sake of institutional unity (Lutterbeck 2013). In addition, soldiers who more strongly identify with the demonstrators will be more hesitant to fire on them. Those connections hinge on whether the armed forces are a conscripted force that recruits from a broader cross section of society or are chosen based on ascriptive identities that accentuate the differences between them and the opposition (Barany 2016). Thus, the ties that bind a military to society are ones that can spell doom for authoritarian regimes.

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## Conclusion

The civil-military field is a sprawling, complex mix of various themes and analytical approaches. But there are threads that weave through the entire fabric, holding it together. At its heart the field shows a lasting concern for how nations attempt to deal

with the one organization that has unchallenged coercive might. Whether it be preventing coups, navigating transitions from ancient regimes to new ones, enhancing professionalism and subordination, or forging stronger ties to society, the field is always preoccupied with the interactions between political leaders, soldiers, and civilians. No matter how seemingly stable those relations may be, they should never be taken for granted. Those relations are dynamic, subject to unanticipated changes that could create moments of instability or crisis. Both policymaking elites and ordinary citizens alike need to pay closer attention to the armed forces – who they are, what makes them tick, what their legitimate needs are, and what roles they should and should not play. Likewise, officers and the enlisted must be more sensitive to the concerns, attitudes, and values of civilians who they ultimately serve. Improvements in civil-military relations will depend on whether enhanced mutual understanding can be forged between the two sides.

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# Poststructuralism in International Relations: Discourse and the Military

Mario Baumann

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## Abstract

This chapter introduces the poststructuralist perspective on international relations (IR). It outlines the epistemological and ontological fundament of poststructuralist thinking and introduces key concepts, notably discourse.

This chapter aims to show that the way we talk about the world, about ourselves and others matters. It employs a particular focus on issues and examples that relate to the military – a domain that for long has been dealt with from more traditional IR perspectives. It seeks to encourage to look at those issues from a different, more critical, angle. It touches upon questions like: Can we ever be fully secure or do we need threats? How did the Global War on Terror become thinkable? What is the relationship between humanitarian interventions and identity?

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M. Baumann (✉)

Brussels School of International Studies, University of Kent, Brussels, Belgium

e-mail: [mb997@kent.ac.uk](mailto:mb997@kent.ac.uk)

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By presenting key contributions to the poststructuralist body of literature in IR, this chapter traces a poststructuralist perspective on issues of international relations, notably the state and foreign policy, security and threats. It encourages to scrutinize them critically and gives an overview of how to employ this theoretical perspective for empirical discourse analyses in practice.

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### Keywords

Poststructuralism · Discourse · Interpretation · Identity · Sovereignty · Security · Securitization · Discourse analysis

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## Introduction

When former US President Donald Trump met with his Russian counterpart Vladimir Putin in Helsinki in 2018, he suddenly found himself confronted with the power of discourse. As a response to a journalist's question on whether he believed US intelligence agencies' accusations that Russia was meddling in United States' Presidential elections, Trump replied: "[President Putin] just said it's not Russia. [...] I don't see any reason why it would be" (Foreign Policy, 2018). His siding with Putin was met with a fierce backlash across the political spectrum in the United States, including in his own party. The Western discourse about Russian disinformation had produced a clear view on who was the perpetrator – Russia – and who was the victim – the United States. Irrespective of the actual circumstances of the US elections, this discourse made Trump's comment virtually unsayable – forcing him to awkwardly deny his remark only one day later (Baumann, 2020: 303; Landler & Haberman, 2018). There is an intimate link between foreign policy and how we talk about ourselves and others. This is the terrain of poststructuralists in international relations. This terrain offers profound and critical insights to anyone seeking to make sense of international relations, including those in the military who are implicated in them on the ground. This chapter seeks to map this theoretical terrain by, first, introducing the basic tenets of the poststructuralist perspective. It will, secondly, trace poststructuralism's entry into the field of international relations (IR) by means of discussing "the state" and, thirdly, the poststructuralist take on "security." A final section will offer a brief guide to methodology, illustrating how to devise theory-driven analyses in practice.

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## A Poststructuralist Perspective on the World

How can we as researchers make sense of the world? Poststructuralism has emerged in part as a response to a more traditional research philosophy that informs other IR theories, such as Realism or Liberalism, as outlined in the preceding chapters (see chapters "► Realist International Relations Theory and the Military" by B. Schmidt, this volume; "► Liberal International Relations Theory and the Military" by

S. Silverstone, this volume). The poststructuralist perspective on the world is different from the maybe more intuitive one adopted by those, often deemed positivist, theories. Positivist theories rest on the assumption that researchers have unmediated access to the “outside world.” They presume that they can uncover “reality,” objectively describe, and formulate true statements about it. Positivism is an epistemological position. Epistemology is a branch of the philosophy of science which deals with the study of knowledge. It concerns questions like what is recognized as knowledge and how it can be acquired (see chapter “► [Philosophy of Military Sciences](#)” by A.M. Sookermany, this volume).

Poststructuralists take issue with such a positivist epistemology. They dispute positivists’ claim of unmediated access, arguing that the researcher cannot take an entirely neutral position. Our observations of the world are always mediated by our *interpretations* of it. Our knowledge of the world is thus not an objective truth but instead depends on how we subjectively perceive it, how we, in theoretical terms, construct it.

Take the basic realist claim that states strive for security. This claim, realists argue, is an apt description of “reality.” They do not question the underlying assumptions informing this claim such as how we come to think of notions as “the state” or “security” in the first place. Poststructuralists take a step back, questioning the meaning of such notions and arguing that our understandings of them are fundamental for how we see the world and, consequently, how we act in it. What does it mean to be secure? What is the threat to be secure from? Just as a stone can be understood as a building block, a war memorial, or a weapon depending on the context, another country does not constitute a threat in itself. Whether we apprehend another country as threatening to us depends on our subjective interpretation of it.

This critical stance towards a positivist epistemology also has implications for poststructuralism’s ontology, a different branch of the philosophy of science. Ontology is the study of being. It concerns questions of what is deemed to exist, what is taken into account, and what can be studied (see chapter “► [Philosophy of Military Sciences](#)” by A.M. Sookermany, this volume). According to poststructuralists, what we should study – that is what is ontologically significant – is not the world out there *as it is* because we can never know that. Instead, we should pay attention to our interpretations of it. It is our subjective understandings of the world – the meaning that we attribute to things like, for example, another country – that are relevant for how we act. Poststructuralists’ anti-foundationalist ontology – assuming that there is no hard foundation for our knowledge “out there” – thus sheds light on meaning and interpretation, on how they come into being and how they change.

But how *do* meaning and interpretation come into being? This is where post-structuralists’ central concept comes in: Discourse. Poststructuralists attribute to language a central role in the production of meaning. The way we talk about things affects how we understand them. Discourses define what we perceive as “normal” or “natural,” what we take as a given and how we look at the world. They determine what is sayable – even imaginable – in a given context. Hence, poststructuralists argue, as researchers we must study language in order to understand what interpretations guide peoples’ actions.

Poststructuralists have developed an intricate idea of how meaning and interpretations are produced in discourse. The poststructuralist understanding of language goes back to an earlier structuralist one formulated in linguistics notably by Ferdinand de Saussure (1857–1913). According to Saussure, language is a system of differences. Things do not have a meaning in themselves; the meaning attributed to them is the result of linking a thing (what structuralists call a “sign”) to some things and differentiating it from others. Discourses in international politics would link “security,” for example, to “peace” and differentiate it from “danger” and “war.” It is through such grids of signification that we make sense of the world.

Jacques Derrida (1930–2004), an important contributor to poststructuralist thought, has taken this structuralist understanding of language further by arguing that the grid of signification is inherently unstable (Derrida, 1978). The relations of linking and differentiation between signs are not fixed but always in motion and transforming. This is why the meaning that we attribute to things can change. In international politics, for example, the notion of “security” has profoundly transformed after the end of the Cold War. Since then, its scope has been extended significantly to cover also nonconventional contexts other than war, such as natural disasters or terrorism. In its 1999 Strategic Concept, for example, NATO extended its traditional notion of security tightly linked to “defense” to also recognize “the importance of political, economic, social and environmental factors” as aspects of security (NATO, 1999). Until today, there are heated political disputes about what should be seen as a threat, ultimately also changing the meaning of “security.”

From Derrida’s claim that meaning is inherently unstable does not follow, however, that meaning also *is* always transforming. Poststructuralists show how discourses strive to fix meaning around a given structure. By articulating something in a certain way, discourses create relationships of sameness and difference and thereby structure the grid of signification. The discourse on the Global War on Terror, for example, has for two decades now linked “the West” to notions of rationality, benignancy, morality, and civilization while differentiating it from “the terrorist,” which again was connotated with notions of irrationality, evil, and barbarism (Buzan & Hansen, 2009: 243–246). Derrida has shown how Western discourses are organized around binary oppositions. Such hierarchical oppositions, or dichotomies, like man/woman, culture/nature, or, with reference to our example, morality/barbarism are powerful signposts in the discursive structure. This structuring may appear to us as natural and just “as it is.” Yet, Derrida has pointed out that any organization of dichotomic terms is not a neutral one but inherently political and normative. Most importantly, he has shown that there is no necessity to any such organization. While discursive structures can become very stable and enduring – think about the persistence of gender roles in Western societies or the Global War on Terror – they can never be ultimately fixed.

This is a fundamental claim of all poststructuralists: No interpretation of the world, no meaning that we attach to it is a necessary one. No interpretation is God-given or otherwise determined. It is just one of many possibilities. This is what poststructuralists call contingency, and it is contingency which makes post-structuralism a profoundly critical project. It encourages us to look beyond the

established order that we take for granted in our everyday life. The fact that such orders – like gender roles, for example – are often treated as “objective” knowledge illustrates what poststructuralists refer to as the power/knowledge nexus. Power and knowledge, poststructuralists argue, are inextricably linked. This understanding of power as productive goes back to Michel Foucault (1926–1984). It points to the fact that discourses establish a seemingly natural order, define what counts as “knowledge,” and construct the meanings and identities through which we make sense of ourselves and the world (Foucault, 1977, 1990). Let’s take a look again at the previous example of gender, which has been at the center of poststructuralist feminist studies (see, for example, Shepherd, 2008). Think of the implications the acceptance of seemingly “objective” gender roles had in the past and continuing today. This illustrates the productive power of discourse. To criticize any form of such “objective” knowledge opens up the possibility to question what seems natural to us. Another concept that for long has remained unquestioned at the center of IR theorizing is “the state.” The poststructuralist critique of this concept will form the point of departure for the next section.

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## The State and Foreign Policy

Poststructuralism entered the IR literature during the 1980s in the context of the Second Cold War. Critical interventions by Richard Ashley (1988), Rob Walker (1993), James Der Derian and Michael Shapiro (1989) targeted how conventional approaches theorized international politics in a seemingly neutral and static way. Poststructuralists argue that the purportedly unchanging eternal truths formulated by those approaches need to be understood rather as the mirror image of a particular period in time (the modern period of sovereign states) and place (the West) (cf. Walker, 1993). This model, however, has become so entrenched that it presents itself to us as an accurate and neutral description of “reality”; and as such it has a profound impact on the analysis and formulation of foreign policy.

A major driver behind this new critical perspective on international relations was a discontent with the role of the then prevalent conception of the state. Poststructuralists do not question the centrality of states for today’s international politics *per se* (Hansen, 2014: 176) in the same way as liberals and others have argued, for example, for a more global or more individual focus. What poststructuralists take issue with is the uncritical “taken-for-granted” attitude of traditional IR theories, such as Realism or Liberalism. Representatives of those theories, so the poststructuralist contention goes, present their view on the world as some kind of “timeless wisdom” (Buzan, 1996) – without engaging critically with the underlying core assumptions that inform those views. For realists, for example, the sovereign state is understood in abstraction from the individual as a unitary and rational actor who, following Hobbes’ state of nature, finds itself in an environment of anarchy without a centralized ordering power. This notion of the state is at the center of realist thinking and therefore plays an unprecedented role for how those scholars explain international politics.

Poststructuralists dig deeper. Inspired by French poststructuralist philosophers like Derrida and Foucault, they do not take such assumptions at face value. They scrutinize, instead, how our understandings of “the sovereign state” affect how we make sense of international relations in the first place. This was the point of departure for some of the early influential poststructuralist interventions into IR, notably the works by Ashley (1987, 1988) and Walker (1990, 1993, 1997). They illustrate that the common understanding of the state rests on a dichotomy of sovereignty inside and anarchy, as its opposite, outside. Sovereignty and anarchy – the national and the international – are thus understood to be mutually constitutive, that is to say they both exist only as the other’s opposite. This reading of dichotomous structures reveals further binary oppositions, for example, between a rational inside and an irrational outside, between order/chaos, security/insecurity, justice/lawlessness, effective institutions/fragile alliances, and others. Consequently, “however normal politics is understood, inter-state politics may be presented as its negation” (Walker, 1990: 15).

Ashley and Walker show how contemporary discourses perpetuate this dichotomy over and over again and thereby produce an understanding of the state as natural and objective – which they maintain it is not. By tracing the evolution of the concept of sovereignty back to its roots in the seventeenth century, Walker (1990) shows that the sovereign state is only *one* of several possible forms for organizing a political community. Other forms, such as hierarchical empires built on socioeconomic order from God, the Emperor, and the church, all the way down to subordinate individuals, do not seem natural in our contemporary world.

Today, its seeming objectivity makes the sovereign state in contemporary discourses the unchallenged and unquestioned form of political organization, and it is hard for us to think beyond it. In this way, dominant discourses have a strong impact on how we think and talk. Consequently, most of traditional IR theorizing unfolds *within* the confines of this modern discourse on the sovereign state and thereby reproduces it. By uncovering the origin and working of this discourse (that is, by showing its contingency, see above), Ashley and Walker deconstruct the traditional notion of the sovereign state. Fleshing out the dichotomies upon which it builds and how they are perpetuated in discourse, they show that the sovereign state is not a neutral description of “the world as it is,” but that it is inherently normative and ideological.

## Self and Others

Walker (1990) further demonstrates that the inside/outside dichotomy that sustains the dominant notion of the sovereign state is also inextricably linked to a notion of identity – that is, how we perceive ourselves. Talking about the sovereign state, he argues, implies a boundary between a community inside and Others outside. For poststructuralists, identity is a central concept because it tells us not only how someone – for example, a state – perceives itself. More importantly, it also tells us what perspective it takes on the world. Understanding a subject’s identity is to

understand how they view the world and thus illuminates why a subject acts in a certain way. To fully appreciate this argument, we require a broader context.

As the inside/outside dichotomy suggests, the poststructuralist conception of identity is inherently relational. A “Self” always defines itself in relation to “Others.” Such a Self can be, for example, a state. France is France because it is not India, Brazil, or Germany. For poststructuralists, a state can be regarded as an actor in international relations because it speaks as a subject and articulates in its foreign policy a notion of “we-ness” – which poststructuralists term a notion of Self. The fundamental question for poststructuralists is: Who speaks (Epstein, 2011)? That also means, however, that poststructuralists need not limit their analyses to states as relevant actors. While the state remains the dominant form of Self in international politics, poststructuralists also take into account any other Self that is discursively articulated – for example, the European Union as a union of sovereign states or the Catalans as an ethnic group with a strong sense of identity.

Crucially, a Self is always defined through its relations to Others. William Connolly (2002) writes that “identity requires difference to be, and it converts difference into otherness in order to secure its own self-certainty” (p. 64). Identity does thus not differ from any other discursive structure that, as outlined above, is the result of processes of linking and differentiation.

Take the example of NATO. NATO’s identity as a Western military alliance during the Cold War was fundamentally shaped by its opposition to the Soviet Union (Klein, 1990). After the Soviet Union ceased to exist, NATO’s identity inevitably changed. Michael Williams and Iver Neumann (2000) point out how NATO’s self-understanding transformed during the 1990s from one of military defense towards one of cultural or civilizational unity based on common values. Suddenly the major Other in the discourses of NATO’s official documents and declarations shifted from an external Soviet threat to “instability,” defined as the absence of those declared common values, notably democracy.

## Identity, Interests, and Foreign Policy

The poststructuralist notion of identity as relational helps to understand how an actor perceives Others and, hence, what kind of foreign policy they might formulate towards them. Have you ever heard that a certain foreign policy-move – such as a troop deployment, a peacekeeping mission, or an intervention – was justified by saying that “it is in our interest”? Poststructuralists argue that to speak of “the national interest,” as many realists frequently do, only makes sense if we understand what decision-makers *consider* to be in the interest of the state (Weldes, 1996). “Interests – ‘national’ or other – are never a priori given,” but always the interests of *someone*. “It follows that we cannot know what someone’s interests are unless we know who that someone is” (Ringmar, 2002: 131). Studying identity discourses is to understand the specific interpretation of the world, that decision-makers might hold. Based on this worldview, different foreign policies may be considered detrimental or beneficial.

This relationship between identity and foreign policy, however, is not a one-way road with the former determining the latter. Since poststructuralists assert that no meaning or identity is ever already given nor ultimately fixed – as posited by rationalist approaches – identity is also the result of discursive practices such as foreign policy. Identity and foreign policy are thus linked in both ways: Their relationship is performative, which means that they are mutually constitutive. Identity discourses facilitate and limit the formulation of particular foreign policies. Those discursive structures determine more or less rigidly what is doable, sayable, or imaginable. At the same time, foreign policies in turn have an impact on how we talk about Others and ourselves.

Take, for example, the Global War on Terror: Speaking of Iran, Iraq, and North Korea in his 2002 State of the Union address, then US President George W. Bush stated that “States like these and their terrorist allies constitute an axis of evil, arming to threaten the peace of the world” whereas America will bring “lasting peace,” “liberty and justice” (Bush, 2002). Referring to terrorism and the “axis of evil,” Bush discursively constructs a “civilized” Self in differentiation from this “threatening” Other. The *representation* – a theoretical term for how something is depicted, talked, or written about in discourse – of those countries as “axis of evil” forms the discursive background, against which the War on Terror becomes intelligible and can be justified. At the same time, this discursive background also came into being and was perpetuated through the foreign policy practices it facilitated. This performative construction of the War on Terror, however, is an ongoing process and can never be complete. Emile Simpson (2014) states that the War on Terror at least partly constitutes “a continuous effort to shape worldwide political perceptions according to the West’s security interests.” Because discourses can never ultimately be fixed, however, the War on Terror “[lacks] a clear end point, as perceptions continuously evolve” (p. 19).

The intimate relationship between identity and foreign policy highlights the centrality of interpretations and shared understandings for making sense of international relations. This forms the background for the topic of the next section “Security and Threat.”

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## Security and Threat

When talking about security, notions of threat and danger take center stage. In international relations, threat and danger are inextricably linked to war and conflict. As outlined in Carsten Rønnfeldt’s introductory chapter to this book section, much of IR’s purpose has traditionally been to avoid war and conflict.

But what *is* threatening? What *is* dangerous? Given that those questions have provoked war and conflict, determined the deployment of troops, or forged alliances, they should not be taken easily. A poststructuralist approach to those questions is hence entirely different from a rationalist one (cf. Rønnfeldt, 2021, this ► [“International Relations and Military Sciences”](#) volume). Rationalists, including proponents of traditional IR theories like Realism and Liberalism, understand security largely in



materialist terms, focusing, for example, on military capabilities (Walt, 1991). They further assume that matters of security can be assessed objectively (Hansen, 2006: 29–30; Buzan & Hansen, 2009: 142–143). Arnold Wolfers (1952), a prominent realist, for example, claims that an “actual or objective state of danger” can – at least retrospectively – be precisely evaluated (p. 485).

Poststructuralists adopt a different perspective on security. They do not deny the reality of war and conflict. Nor do they deny the existence of obvious and immediate threats to our well-being, such as the danger of being run over by a car or the potentially deadly consequences of being hit by a bullet. As the discussion of the term “security” above suggests, however, poststructuralists argue that what is perceived as a threat is not something that can be objectively measured. Quite to the contrary: Whether we consider something dangerous is always an *interpretation*. To call something or someone a threat to security should therefore not be merely accepted as an objective observation but understood, instead, as a normative claim. Are troops crossing the border an aggressive attack, a liberation, or maybe part of a peacekeeping operation? Was Crimea in 2014 annexed by or reunited with Russia? The dominant discourses on this event might diverge substantially in Kyiv and Moscow. David Campbell, an early representative of poststructuralism’s entry into IR, writes that “[danger] is not an objective condition. It (sic) is not a thing which exists independently of those to whom it may become a threat” (1992: 1). What security is, is fundamentally tied to our perspective on the world and can therefore never be discussed in separation from who we are. Walker (1997) asserts that our understanding of security is derived from an idea of “who or what it is that needs to be secured” (p. 68). Talking about security in the context of international relations therefore inevitably reasserts a certain identity. Discourses of security, however, not only constitute and reaffirm who we are. They also define who or what the threatening Other is from which we need to be protected. They establish categories of Self and Other, friends and enemies. Do you remember from the last section that identity is relational? Poststructuralists assert that security discourses are central for constructing such Others to which the Self relates.

## Changing Threats

A seminal study on the construction of enemies during the Cold War was presented by Campbell in his book *Writing Security* (1992). According to him, threat and danger are a fundamental necessity for the state to exist. The state, Campbell argues, relies on the articulation of outside threats against which it can define the inside. From this perspective, the Cold War was much more than a military confrontation between two superpowers. On the US side, it was a process through which discourses on the dangers of communism and the Soviet threat continuously (re-)produced a particular US identity. Campbell also shows how those discourses of threat and danger served to discipline dissident elements within the country. Discursively linking those “internal Others” to an external threat delegitimizes their cause and justifies their persecution.



Campbell goes as far as to say that “[should] the state project of security be successful in the terms in which it is articulated, the state would cease to exist.” (p. 12). His argument thus suggests that the West would suffer from a major identity crisis after the collapse of its radical Other, the Soviet Union. At the time, post-structuralism was grappling with the question of whether states need enemies (Buzan & Hansen, 2009: 218), and the changing security discourses produced a more nuanced understanding of it.

With the Gulf War of 1990–1991 and the conflicts in Bosnia and Kosovo, the theme of military interventions in other states became more pronounced. Was Campbell’s notion of the radical threatening Other still apt to make sense of those new contexts? In her book *Simulating Sovereignty* (1995), Cynthia Weber analyzes how justifications for such interventions have evolved over time. She finds that the discourses legitimizing interventions frequently invoke “the people,” which must be protected from their own government. Similar to NATO’s shifting self-understanding after the Cold War as illustrated above, Barry Buzan and Lene Hansen (2009) argue that the increasing prevalence of the humanitarian intervention-discourse in the 1990s also changed the identity of “the West.” Poststructuralist studies now identified as the central Other not the radical threat anymore that Campbell found during the Cold War. Instead, the discourses invoked the “humanitarian ‘victim’ in need of a ‘rescue’,” which depoliticized and thereby helped to legitimize Western interventionist policies (pp. 219–220).

All this is to show that poststructuralists have a deep interest in security. They are not concerned, however, with security as an objective state like rationalists such as realists and liberals would have it. They are interested, instead, in understanding how security discourses bring into existence an understanding of ourselves and Others, friends and enemies. When dealing with conflicts, this poststructuralist approach cautions us to be aware that there is certainly more than one “objective” interpretation of it. When engaging with complex settings, such as Afghanistan, one should therefore be wary of a simple division into friends and enemies. This is because others implicated in the conflict – the broader public, nongovernmental actors, neighboring states, or an international audience – might have different interpretations of it and, possibly, identify different threats or draw the friend-enemy line differently. The same act, for example, a counterinsurgency operation, can be perceived vastly differently by different audiences, because different discourses will offer different frameworks for making sense of the operation. Poststructuralists suggest that an awareness of the different discourses prevalent within a conflict is crucial for those analyzing or engaging with it – at a policy, strategic, or tactical level.

### **Securitization**

“Securitization” theory offers another insightful perspective on security. While not a poststructuralist approach in the narrow sense, securitization theory

(continued)

points our attention to security dynamics that are equally interesting to post-structuralists, namely the role of language and representation in and for international politics. Securitization has sparked a broader discussion in the field of IR. A distinction, for example, is often made between a “Copenhagen School” and a more sociologically oriented “Paris School” (cf. Wæver, 2004). The former can be traced in particular to Barry Buzan, Ole Wæver, and Jaap de Wilde’s *Security: A New Framework For Analysis* (1998).

Buzan et al.’s point of departure is the widening security agenda since the 1970s and 1980s (Wæver, 2004: 8). This widening was a reaction to the narrow focus on military matters during the Cold War (Fierke, 2015: 1–2). While generally sympathetic to that move, Buzan et al. (1998) pose the question of what it means that nonmilitary issues, for example, environmental, economic, or social phenomena, were increasingly framed as problems of security. Irrespective of the sector, they argue, this framing follows the same underlying logic. This is what Buzan et al. term “securitization”: An issue is presented – for example, by a politician – as an *existential threat* that requires *emergency measures* and this claim is *accepted* as such by the audience. Such an issue could be the amassing of foreign troops at the border, environmental pollution, or migration. Think of the role the alleged – and later on never found – Weapons of Mass Destruction of the Hussein-Regime played in public discourse prior to the Iraq war in 2003 (cf. Donnelly, 2013). In the 2002 State of the Union Address, Bush said “By seeking weapons of mass destruction, these regimes pose a grave and growing danger. They could provide these arms to terrorists, giving them the means to match their hatred. They could attack our allies or attempt to blackmail the United States. In any of these cases, the price of indifference would be catastrophic.” (Bush, 2002). Bush clearly insinuates that doing nothing would pose an existential threat to the United States and therefore suggests to act accordingly.

Securitization is not unproblematic, however. Because “‘Security’ is the move that takes politics beyond the established rules of the game” (Buzan et al., 1998: 23), securitization withdraws an issue from the usual political process. The justification of exceptional measures through security thwarts the careful deliberation of an issue and may even circumvent established democratic procedures and institutions.

Consequently, in order to soberly weigh and evaluate delicate issues from various perspectives, Buzan et al. (1998) argue in favor of *desecuritizing* them: “the shifting of issues out of emergency mode and into the normal bargaining process of the political sphere” (p. 4).

Securitization theory, just like poststructuralists, treats security primarily as a matter of subjective interpretation: “‘Security’ is [...] a self-referential practice, because it is in this practice that the issue becomes a security issue—not necessarily because a real existential threat exists but because the

(continued)

issue is presented as such a threat” (Buzan et al., 1998: 24). This underlines the role shared interpretations play for foreign and security policies. Consequently, the task of the researcher “is not to assess some objective threats that ‘really’ endanger some object to be defended or secured; rather, it is to illuminate the processes of constructing a shared understanding of what is to be considered and collectively responded to as a threat.” (p. 26). The next section will outline in greater detail how we as researchers can shed light on such discursive dynamics in the context of international relations.

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## Analyzing Discourse

The preceding sections introduced the poststructuralist perspective on international relations. For many, this perspective is not the most intuitive and accessible one. Once you come to realize, however, the role subjective interpretations play in international politics, you will recognize how powerful a poststructuralist inquiry into their constitution and working can be. But how can you make this theoretical perspective work for your empirical analysis? This section will outline some methodological considerations when studying discourse. It will first clarify the research logic of poststructuralist inquiries before presenting the method of poststructuralist discourse analysis (For an overview of different traditions of discourse analysis, see Jørgensen and Phillips (2002)).

### A Poststructuralist Research Logic

Like any inquiry in our field, let us start this methodological intro with the research question. Unlike more traditional, rationalists IR theories like Realism or Liberalism, poststructuralists do *not* ask research questions that follow a causal why-logic, such as “why does country A attack country B”? This kind of question requires the identification of distinct causes that can explain a given outcome. Such a causal description can only make sense within a positivist framework that, as you will remember, is built on the assumption of objective knowledge about the world.

Poststructuralists, on the other hand, are concerned with how the meaning and identities that form the context of our actions are constituted and how they change. Poststructuralist inquiries shed light on the particular discursive structures that facilitate certain practices – or policies – make them thinkable and doable within a given discursive context. In short, they analyze discourse in order to understand its “implications [. . .] for the way we think and act in the contemporary world” (George, 1994: 191). Poststructuralist research questions therefore follow a *how possible*-logic. An example could be: “How does country B come to be represented as a threat in country A’s foreign policy discourse?” An answer to this question can help to

understand how a conflict between country A and B becomes possible in the first place. Importantly, poststructuralists always keep in mind that there is no necessity to any given discourse and that it is only one of many possibilities. As you will remember, this is called the “contingency” of discourse. Even if in our view the representation of country B as threatening seems “natural” or “objective,” poststructuralists will maintain that this is just one of many possible interpretations and that no discourse is constituted irrevocably. This is where deconstruction comes in: The seeming objectivity of a discourse is unmasked by showing how this particular discourse works, for example, what dichotomies sustain the representation of country B as threatening.

Whether country B has come to be understood as a friend or a foe will facilitate vastly different policy options. To analyze a given discourse thus also means to “[consider] the manifest political consequences of adopting one mode of representation over another” (Campbell, 1992: 4). To sum up, discourse analysts seek to capture how meaning is discursively produced and how it changes, as well as the implications of one particular discourse over other possible ones.

## Translating Theory into Practice

Against this background: How to carry out a discourse analysis in practice? Because poststructuralists are interested in profoundly understanding a given context, their analyses are based first and foremost on qualitative data. This could be any text, such as a speech, an interview, or a newspaper article. A close investigation thereof is aimed at understanding the underlying discursive structure, “how signs are linked and juxtaposed, how they construct Selves and Others, and how they legitimize particular policies” (Hansen, 2006: 41). While every articulation forms part of discourse and therefore lends itself for analysis, understanding discourse as producing *shared* understandings suggests taking into account a broader set of texts (Milliken, 1999: 233). But how many? And when to stop? To this, Jennifer Milliken (1999) responds that an “analysis can be said to be complete (validated) when upon adding new texts [...], the researcher finds consistently that the [discursive structures] she has generated work for those texts” (p. 234).

There is no ready-made template for how to carry out a poststructuralist discourse analysis. As a “problem-driven” approach (Howarth, 2005), every discourse analysis ought to be tailored to the research interest in question. Lene Hansen’s book *Security as Practice* (2006) constitutes a comprehensive guide to discourse analytical research designs. She highlights four parameters in particular that should be taken into account when devising an empirical analysis (pp. 65–82). In order to illustrate how to approach discourse analytical inquiries, the following paragraph will provide a simplified overview of Hansen’s four parameters. A promising research design will take each of them into account. As with every methodology, this requires you to take many informed decisions and to justify your choices.

An empirical inquiry must, first, specify *whose* discourses it focusses on. Are you looking at the foreign policy discourse of one or more Selves? Who is speaking

(cf. Epstein, 2011)? Are you focusing on one or more states or other foreign policy subjects?

A second parameter to be determined is *what* event the respective discourse is about. This could be any issue in international politics: A conflict such as the ongoing crisis in Ukraine or a topic like climate change. An example: Analyzing Russia's foreign policy discourse on the events in Ukraine, how it represents the Russian Self, the Ukrainian, and the Western Others can be helpful for understanding how this discourse facilitated certain Russian foreign policies towards Ukraine and how it precluded others.

A concise analysis, thirdly, requires a clarification of *where* to look for a specific discourse. What is the discursive arena of interest? Are you taking into account only the Russian government's official rhetoric, or are you broadening the scope of your study by also including the wider foreign policy debate as articulated by other political figures or in the media? To study media discourses can be helpful in order to gauge the room of maneuver politicians find themselves in. After all, this constitutes the discursive context in which policy-makers formulate, explain, and justify foreign policies. For an even broader inquiry, it might also be insightful to consider discourse as articulated in cultural sources (see, for example, Der Derian, 1992, and Shapiro, 1988, 1990).

A final parameter Hansen (2006) points out is the temporal dimension of an inquiry, the *when*. What time frame are you taking into account? Are you looking at one particular moment, or are you comparing different periods? To pick up the example above, you could focus your analysis of Russian foreign policy discourse on key moments in the Ukraine crisis, such as the Maidan protests or the annexation of Crimea. Alternatively, you could also choose a more long-term perspective to illuminate how representations, for example, of Ukraine or "the West," have evolved over time in the Russian discourse.

To trace the development of a specific representation or concept is to study its "genealogy." Foucault has coined this notion as "history of the present." A genealogical inquiry seeks "to show 'descent' and 'emergence' and how the contingencies of these processes continue to shape the present" (Garland, 2014: 371; cf. Foucault, 1984: 76–100). The aim is thus to show that what now may be taken for granted has not always been understood in this way but is, in fact, the outcome of a series of forgotten struggles in the past that might as well have turned out differently. Some groups of people might have had a greater impact in this process because others were marginalized or not allowed to speak. A famous example of a genealogical inquiry is provided by Edward Said's book *Orientalism* (1978). Said traces how the representations of "the Orient" have evolved in Western European intellectual discourses since the eighteenth century. He shows how those representations, that continue to impact the Western perception of the East, were discursively constructed in contrast to a superior "occidental" Self, thereby simultaneously reflecting and perpetuating European racism and imperialism. As such, a genealogical inquiry not only illuminates what changes and/or continuities a certain concept underwent and how our present thinking came about. Importantly, by exposing how the productive power of discourses established seemingly objective meanings and identities, it is a reminder

that much of the understandings that guide our thinking and acting today are a contingent outcome of the past, and it therefore encourages us to question them.

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## Conclusion

This chapter aimed to show that discourse – the way we talk about the world, about ourselves and others – matters. It brings into being our understanding of the world and as such cannot be separated from our thinking and acting. Discourses construct what is considered “natural” or “objective.” The poststructuralist project does not accept those established orders as “natural” and points to the contingency of discourse, that is, of any meanings and identities.

This poststructuralist approach has also encountered criticism. Two often articulated critiques merit a quick critical review. The first one concerns post-structuralism’s epistemology – as you remember, this philosophical term concerns the question of what counts as knowledge. Representatives of traditional approaches have accused poststructuralists and other so-called reflectivists (cf. Rønnfeldt, 2021, this volume) of lacking “a coherent research program” (Keohane, 1988: 379) that would meet scientific standards. This judgement is shortsighted, however, because poststructuralists take issue with those standards in the first place. Robert Keohane and others thus fail to acknowledge the divergent epistemological positions post-structuralists take on what counts as knowledge.

A second line of criticism (cf. Brown, 1994) takes issue with poststructuralists’ anti-foundationalist ontology. As you will remember, poststructuralists claim that there is no hard foundation for our knowledge “out there” and that the meaning we attach to things is a discursive construction instead. Critics have dismissed such a worldview as “relativist” or “nihilistic” and claimed that it rids one of the ability to distinguish right from wrong. This accusation, however, mistakes poststructuralists’ rejection of transcendental foundations as a wholesale rejection of the fact that things *do* exist. For example, poststructuralists do not question or reject the existence of “the state” as a contemporary form of political organization. They simply point out that “the state” is a contingent result of historical processes that could as well have taken different turns. It therefore should be regarded as one possibility of many instead of a neutral description of simply “how it is.” Poststructuralists’ mission, so to say, is not to eliminate a certain way of thinking, but to highlight that this particular way of thinking is not God-given or neutral.

Poststructuralism has much to offer for anyone interested in and working with international affairs, military professionals included. Its analytical approach reminds us that there is no objective, no God-given, foundation to our understandings of the state, threats, foreign policy, and other aspects of international relations. Instead, the meaning individuals attach to the world and their respective behavior are shaped by and at the same time shape the discourses that they are implicated in. From the point of view of the military, special attention ought to be paid to discourses of security. It is through discourses of security that the use of armed force is typically justified. Whether or not something, for instance another state, a militant organization, or

migration, is perceived as a threat has far-reaching consequences for a country's foreign policy decisions. Like any foreign policy discourse, talking about security is intimately linked to how we see the world and what policies we deem appropriate. It is therefore important to keep in mind that "threats" are no objective conditions, but normative, political representations. Instead of taking them at face value, post-structuralists argue, we as researches should ask how those discourses work to structure, facilitate, and, at the same time, limit our thinking and acting within the established order. There is no escape from discourse, but being aware of how they work is a precondition for being critical about them and questioning seemingly objective "truths."

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## Cross-References

- ▶ International Relations and Military Sciences
- ▶ Realist International Relations Theory and the Military
- ▶ Liberal International Relations Theory and the Military
- ▶ Philosophy of Military Sciences

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# International Relations and Military Sciences

Carsten F. Roennfeldt

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## Abstract

For all who consider war a political instrument it should be clear that the role and missions of armed forces can only be properly understood in the context of international relations whereby military professionals must have a solid understanding of this subject. This chapter reaches out to students at military and civilian educational institutions and offers a big-picture introduction to the academic field of International Relations (IR) with emphasis on military matters. It does so by presenting four major debates that highlight key questions and divergent theories and approaches that have shaped this field. The second part of the chapter relates these debates to IR's scientific foundation in a way that can inspire current academic endeavors to develop the military sciences.

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C. F. Roennfeldt (✉)

Norwegian Defence University College/Norwegian Military Academy, Oslo, Norway

e-mail: [cronnfeldt@mil.no](mailto:cronnfeldt@mil.no)

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International Relations, International Politics, War, Armed forces, Philosophy of science, Military sciences

## Introduction

In the section “War Is an Instrument of Policy” of Carl von Clausewitz seminal work from 1832, the Prussian officer famously makes the point:

[W]ar is simply a continuation of political intercourse, with the addition of other means. . . war cannot be divorced from political life; and whenever this occurs in our thinking about war, the many links that connect the two elements are destroyed and we are left with something pointless and devoid of sense. (1989, p. 605)

The contemporary officer Simpson (2012) adds that knowing how to achieve political outcomes by military means is a primary task not only for senior but also for junior officers. In the same vein, former US Secretary of Defense Robert Gates (2011) coined contemporary wars with the term “Captains’ wars” to describe the responsibility put on lower ranks to make decisions “of higher and higher degrees of consequence and complexity.” It follows from such lines of reasoning that military officers and other professionals concerned with the conduct of war must understand politics.

In the context of military sciences this chapter offers a “big picture” introduction to the academic discipline of International Relations (IR). This is a sub-field of political science oriented more towards relations between, than within, states. Traditionally, IR also draws from the academic fields of history, philosophy, and international law and has increasingly fertilized its inquiries with insights from many other disciplines. In addition, the chapter clarifies IR’s scientific foundation by addressing cardinal philosophy-of-science questions. The chapter’s overall argument and hence its structure is visualized in Table 1 inspired by Wæver (1996, p. 157):

The argument is divided in two parts. Elaborating on Table 1’s top horizontal row, the first part presents four major debates that have shaped IR in its 100-years history. This portrayal of the discipline is common (Wæver 1996; Jackson and Sørensen

**Table 1** An overview of four major IR debates’ emphasis on four different philosophy-of-science branches. High numbers of “x” indicates a branch’s relevance in a debate. For a general introduction to philosophy of science and the specific terms listed in Table 1’s left column see Sookermany (“► [Philosophy of Military Sciences](#)” in this volume)

	1st IR debate	2nd IR debate	3rd IR debate	4th IR debate
Teleology	xxx	xx	x	
Ontology	x	x	xxx	x
Epistemology	x	xx		xxx
Methodology		xxx		xx

2007), but not uncontroversial (Schmidt 2012). It is chosen here to highlight some defining features of the discipline and to introduce major divergences that continue to surface in contemporary IR discussions. Clearly, multiple scholars have added a host of nuances to these debates, but to provide an overview this chapter singles in on their protagonists and on a few of their crucial points of disputes that have come to define different strands of IR. Addressing Table 1's left column, the second part of the chapter relates these four IR debates to four philosophy-of-science branches and suggests how the findings may inspire further developments in the military sciences. Clearly, this brief chapter cannot provide a comprehensive introduction to all issues, but it establishes an overview to identify scholarly perspectives of particular interest that readers may explore further.

Three initial clarifications on terminology are useful. First, it may be confusing that IR scholars introduced in this chapter use different notions to refer to the same phenomenon, as illustrated by the terms "international relations" and "international politics." However, British-inspired IR scholars tend to use the former term, while the latter is frequently used in the USA. Second, sometimes scholars use the same terms to refer to the subject matter, i.e., the actors and topics studied – normally indicated with lower cases – and at other times to the academic discipline – normally with the first letters in upper cases. To be consistent, this chapter applies the abbreviation IR to refer to the discipline. Finally, the terms "schools of thought" and "theory" are here used interchangeably, although the former is generally conceived as a broader term.

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## Four Major IR Debates

To begin with, IR is a relatively young academic discipline institutionally established only in 1919 (Evans and Newnham 1998, p. 275). Obviously, war, international cooperation, and related topics had been scrutinized in the past by among others military officers like the Athenian Thucydides (460–400 BC), his contemporary Chinese Sun Tzu, and Clausewitz (1780–1831), and by diplomats like political philosopher Niccolò Machiavelli (1469–1527) from what is now Italy and the Dutch lawyer Hugo Grotius (1583–1645) to name but a few. The British political philosopher Thomas Hobbes (1588–1679) and the Prussian moral philosopher Immanuel Kant (1724–1804) also studied war and proposed how it could be abolished. Such scholars' reflections form part of the large arsenal of ideas from which contemporary IR scholars draw. Their nationality is mentioned to highlight that almost all the above were Europeans, and to make the point that IR remains a western-dominated discipline (Acharya and Buzan 2017).

World War I's devastating effects on people across the globe drove many to join forces under the motto: "Never again." Taking US President Woodrow Wilson's (1856–1924) lead countries like Great Britain, France, and Italy sought new and more peaceful forms of international cooperation. These four major powers along with some 23 other states met at the Paris Peace Conference in 1919, and the following year established the League of Nations with the aim of promoting

collective security based on the idea that if one state attacked another, all other states should join forces against the aggressor. Soon Great Britain, the US and Germany established university departments and research institutes of international affairs to support this broad effort with academic insights.

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## First IR Debate: Utopia and Realism

At the eve of World War II, Edward Hallett Carr (1892–1982) opened the first major IR debate with a devastating attack on Alfred Zimmern (1879–1957) and likeminded “utopians” – a catch-all label Carr used to describe most IR scholars during the interwar period. This term is adopted here only because it simplifies the presentation of the debate but implies no normative judgment. He criticized utopians for failing to explain why wars occur and for believing institutions could create peace.

The utopians’ idea that states can curb power politics by means of international institutions was based on the flawed assumption that states will agree to refrain from using war as an instrument of policy, Carr argued. No such harmony of interests exists between states. On the contrary, many have benefitted from war, notably Great Britain and the USA. Others, like Poland, Finland, and Czechoslovakia, owed their independence to World War I. Indeed, Germany’s preparations for and resort to war in the 1930s can be seen, at least partly, as an expression of the lessons Germans drew from the 1864–1871 wars that unified them as a people within one major state. And while also Germany suffered heavily from World War I, they primarily attributed this to the fact that they lost it (Carr 2001, p. 50).

Carr was also critical of the utopian notion that international peace can rest on a principle to seek “the greatest good of the greatest number” (2001, p. 42). It works in liberal domestic politics, when law-enforcement measures spur minorities to submit their interests to that of the majority. At the international level, however, no similar measures, short of war, exist to coerce a state to accept submission. Utopians put the cart before the horse when they assume that states driven by a sense of moral duty will be compliant. In international affairs morality is a function of politics, not the other way around. States pursue political interests ultimately by means of war: “the ruler rules because he is the stronger, and the ruled submit because they are the weaker” (Carr 2001, p. 42).

However, Carr found the utopian approach to IR natural. Just like medical science was created to promote health and the science of engineering was created to improve constructions, IR too was created for a purpose: the desire to abolish war. However, so far scholars had wished away power:

Like other infant sciences, the science of international politics has been markedly and frankly utopian. It has been in the initial stage in which wishing prevails over thinking, generalization over observation, and in which little attempt is made at a critical analysis of existing facts or available means. (Carr 2001, p. 8)

With another world war in the making, Carr argued, it was time for the academic discipline to move on: “[I]n the development of a science, [what] follows the breakdown of its first visionary projects, and marks the end of its specifically utopian period, is commonly called realism” (2001, pp. 9–10). He saw this as “a necessary corrective to the exuberance of utopianism” (2001, p. 10) and mobilized interest for “realism” as a new school of thought, which has since dominated IR (see “► [Realist International Relations Theory and the Military](#)” by Schmidt in this volume). Thus, the term “realism” does not necessarily refer to theories that describes the world as it “really is.” The term can be seen as a sale pitch some scholars have chosen to present their ideas as providing more correct explanations of international affairs. Indeed, other scholars find realism unrealistic (Oren 2009).

Note that in contrast to many later realists Carr valued utopian ideas because they can “counteract the barrenness of realism. . . Utopia and reality are thus the two facets of political science. Sound political thought and sound political life will be found only where both have their place” (2001, p. 10).

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## Second IR Debate: Traditional Versus Scientific Methods

The second major debate began in the 1950s and primarily concerns how one should study international affairs. The dispute is prominently illustrated in Morton A. Kaplan’s (1921–2017) 1966 article “The New Great Debate: Traditionalism vs. Science in International Relations” which responded to Hedley Bull’s (1932–1985) recent critique. Bull lamented that methodologies from the natural sciences were being introduced into IR by Kaplan and likeminded scholars, calling them “as remote from the substance of international politics as the inmates of a Victorian nunnery were from the study of sex” (Bull 1966, p. 366). Be that as it may, the new methods soon dominated the academic field, particularly in the USA, and still do.

“Traditionalism” refers to classical methods used by Machiavelli, Carr, and Bull, among others, while the scientific approach is often associated with the works of Kaplan and Thomas C. Schelling (1921–2016). As above, these terms are adopted here only for presentational purposes. It shall be noted that Bull (1966, p. 362) stressed that the term “scientific” – borrowed from the field of natural sciences – captures the respective scholar’s aspiration rather than their performance.

According to Bull the substance of international politics can be grasped by studying questions like: Which actors, i.e. states, mankind, or others, are particularly important in international relations? Do norms exist between such collectives of actors to an extent they form a society that moderates their behavior? If so, what kind of norms regulate war? Can wars be legitimate for instance on humanitarian grounds? Traditionalists approach such questions with an understanding that international relations, as a subject matter, is fundamentally different from those found in the physical world. IR cannot uncover natural laws and universal theories of the kinds developed in the natural sciences. One reason is that international affairs comprise an unmanageable number of variables, such as actors, dynamics, and

norms, that cannot be studied with natural-science methods like controlled experiments in closed laboratories. Moreover, IR's subject matters are, in Bull's formulation, "changing before our eyes and slipping between our fingers even as we try to categorize it" (1966, p. 369). Hence, traditionalists appreciate their field of study as normative and inconclusive and have no time for methods requiring proof and measurement.

Traditionalists emphasize that they study subjects, i.e., human beings and social groups, while the natural scientists primarily study objects. These subjects are influenced, if only in ever so minor and indirect ways, by the very theories IR scholars have developed in the past. For instance, when government officials shape and formulate nuclear policies they may be influenced by ideas and terms developed by scholars writing on balance-of-terror theory. Accordingly, any effort to capture such abstract and political relations in causal terms adopted from the natural sciences, with independent and dependent variables, will be misguided. Instead, traditionalists tend to base their analysis on methodologies adopted notably from political science, history, philosophy, and law. Such methods rely on scholars' judgments to select factors for studies, and to formulate and test hypotheses. Crucially, such judgments cannot be but subjective. Hence, traditionalists do not see their work as a contribution to a cumulative body of knowledge – like natural scientists adding stones to the mountain of science so to speak – but as part of a broad debate about fundamental questions in which they "feel impelled to build their own houses of theory from the foundations up" (Bull 1966, p. 370).

Kaplan took issue with these traditionalist methodologies. To him they offered little more than:

[a] great mass of detail to which absurdly broad and often falsifiable generalizations are applied. . . indiscriminately over enormous stretches of time and space. They are sufficiently loosely stated so that almost no event can be inconsistent with them. (1966, p. 15)

As an alternative he advocated a scientific methodological approach to develop a body of IR theories that more precisely explained and predicted human behavior. Kaplan argued: "Unless scientific [methodological] procedures are followed, to the extent the subject matter permits, intuitions cannot be falsified, and science cannot grow" (1966, p. 4). He favored systemic approaches and pointed to airplanes' automatic pilots and computer games as evidence. They predict human behavior with a high degree of certainty by processing data of independent and dependent variables recorded from actions of pilots and expert players in multiple situations. The empirical findings are formulated as "if-then" data based on a causal logic and methodological procedures similar to those used in the natural sciences. Other social sciences, like economics, had already adopted such methods and Kaplan (1966, pp. 2–3) found them equally useful to IR.

Kaplan illustrated the scientific methods' utility with reference to his own models that aimed to explain and predict actors' behavior in balance-of-power systems. To this end he computed datasets of independent variables, like military capabilities and economic assets, and dependent variables, such as the number and types of states in

different systems. He formulated hypotheses of the ways these variables may relate, filled in historical data for both types of variables, tested the hypotheses and compared the findings. On that basis he concluded that balance-of-power systems drive alliances to be of short duration and wars to be fought with limited objectives, and further that a bipolar balance-of-power system is less likely to reinforce some parts of international law (Kaplan 1966, pp. 8–9).

Bull (1966, pp. 371–2) was not impressed. He held Kaplan's model offered little new knowledge, failed to account for important balance-of-power considerations, and gave no reason to believe the selected variables were particularly relevant. Bull pointed to the paradox that while Kaplan "aspire[s] to a theory . . . based either upon logic or mathematical proof, or upon strict, empirical procedures of verification," his conclusions are based on guesswork more arbitrary than the traditional approach would approve of (1966, p. 362). Bull generally criticizes the use of models in IR for directing attention away from the empirical field of study, and towards a few variables selected on questionable assumptions. As a result, students are less likely to develop a sense of the substance and dynamics in international relations and will become ill-equipped to decide on the moral dilemmas in world politics (Bull 1966, p. 368).

In addition, the validity of Kaplan's explanations and predictions relies on the quality of the historical data he uses. In 1961, Carr pointed to this Achilles-heel of the scientific approach when he asked: What is a historical fact? He warned against treating historical facts as natural scientists treat their data. One reason is natural scientists study material things that "impinge on the observer from out-side and are independent of his consciousness" (Carr 2018, p. 9). However, IR's subject matters are the ideas and behavior of human beings, which involves different and more extensive interpretation. Since scholars decide what counts as historical facts these facts cannot be objective. He offers an example: millions have crossed the Rubicon, the river some 300 kilometers north of Rome, yet of all of these history only records Caesar's crossing on the 10 January 49 BC on his way to seize power in Rome. The reason, Carr suggests, is that this specific crossing led to the rise of the Roman Empire. So, while a natural scientist may start out from a set of objective facts and draw conclusions based on that, IR scholars should be aware that "the historian is engaged on a continuous process of molding his facts to his interpretation and his interpretation to his facts" (Carr 2018, p. 29). If Carr is right, on which facts can scientific IR scholars rely to construct theories and models?

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### Third IR Debate: The Inter-Paradigm Debate

In the 1970s two alternative schools of thought – i.e., liberalism and structuralism, which will be introduced shortly – challenged realism's dominant position in IR. They offered radically different views on key theoretical features, such as the international systems, the relevance of different kinds of actors, and the dynamics and relations between them:



Each [school] begins their analysis from a particular assumption that determines the kind of questions they ask, and therefore the answers they find. They are like three toy trains on separate tracks travelling from different starting-points and ending at different (pre-determined) destinations, and never crossing each other's path. (Strange 1988, p. 16)

Moreover, since the three schools of thought described different realities there was no way to test which was valid. IR's credibility and relevance for policy seemed in jeopardy.

Michael Banks (1985) offered some clarity by framing the situation in the IR-discipline as an inter-paradigm debate. The concept of paradigm was borrowed from the philosopher of science Thomas S. Kuhn's seminal theory about knowledge in the natural sciences. He was critical of the dominant idea that scientific knowledge develops in a cumulative manner. Rather, he argues, scholarly communities share a coherent set of ideas and assumptions about their field of study, i.e. paradigms, based on which they carry out research on more specific topics in a problem-solving manner. A paradigm can last several centuries but will eventually be replaced by another as scientists encounter unacceptable amounts of empirical findings that contradict the dominant paradigm. His argument may be illustrated with Nicolaus Copernicus' (1473–1543) paradigm of the solar system, which replaced Claudius Ptolemy's (100–170) geocentric paradigm, as astronomers found it increasingly difficult to theorize about planets' trajectory movements based on Ptolemy's model. This model put the Earth at the center of the planetary system, whereas Copernicus had the sun at the center of his paradigm.

Banks (1985, p. 9) argues that IR's three abovementioned schools of thought could be seen as paradigms. Realism was broadly introduced in the first debate above. Liberalism – which Banks refers to as pluralism – comprises several theories, including utopianism, which have reasonable common assumptions and explanations (see “► [Liberal International Relations Theory and the Military](#)” by Silverstone in this volume). Structuralism originates from the historical materialism of Karl Marx (1818–1883), arguing that major political changes in the history of mankind involves class struggles caused by economic and technological changes as illustrated by the changes from feudal to capitalist political system in the West during the eighteenth and nineteenth centuries (Banks 1985, p. 17). From this outlook, the sociologist Immanuel Wallerstein (1930–2019) offers to IR the notion “world system,” which he defines as a “unit with a single division of labor and multiple cultural systems” (quoted in Wæver 1992, p. 110). This he argues, makes many people poor and a few very rich.

Banks highlights the three IR paradigms' fundamentally different assumptions. Realists focus on states as unitary actors that by means of military force get their way, or are pushed aside, like billiard-balls in an international system no one controls. Liberalists widen the scope of relevant actors to include states but also international institutions, markets, multinational companies, ethnic groups, individuals, and others. Such actors operate in an international “cobweb” of numerous crisscrossing relationships driven by a host of social dynamics. Structuralists picture the global system as a multiheaded octopus with powerful tentacles constantly

**Table 2** Summarizing Banks’ (1985) presentation of three distinct IR paradigms

	Realism	Liberalism	Structuralism
System-image	Anarchy	Cobweb	Octopus
Actors	States	Various kinds	Classes
Dynamics	Military force	Complex social movements	Political economy
IR explains	States’ power politics	International integration	Global contrasts between rich and poor

extracting wealth from weak peripheries toward the powerful centers. The differences may be visualized in Table 2.

Two key points from Bank’s portrayal of the third debate are particularly useful for students of international relations. First, paradigms are analytical frameworks that offer different appreciations of international affairs (Banks 1985, p. 20). This may be illustrated with the notion “security”: Realism can be used to analyze security in terms of power politics; liberalism can help understand how international integration and institutions may enhance security; and structuralism broadens to concept of security to include for instance survival from poverty.

The other key point is Banks’ notion of theory. He starts out from the presumption that IR is about understanding the international system as a whole. This seems an overwhelming task because it potentially includes billions of people who make a living in a multitude of ways, who are divided into almost 200 differently organized sovereign states, who have common or conflicting interests, and much more. Scholars aim to portray this complex reality in a meaningful way by simplifying it, without distorting it. Banks clarifies: “To do this is to theorize. All discussion of world affairs rests upon assumptions about which things are the ones that really matter” (1985, p. 7). He continues:

It is naive and superficial to try to discuss IR solely on the basis of “the facts”... because they fit a concept, the concept fits a theory and the theory fits an underlying view of the world... Theory consists of both analysis and synthesis. To analyse is to unravel, to separate the strands, or to take to pieces. To synthesize is to reassemble, to piece together the parts in such a way as to compose a whole that makes sense. General theory in IR, then, consists of dividing the human race into sections, noting the significant properties of each, examining the relationships between them, and describing the patterns formed by the relationships. (1985, pp. 7–8)

This understanding of theory and theorizing reflects a widely used scholarly practice which was challenged in the next debate.

## Fourth IR Debate: Rationalism Versus Reflectivism

In the 1980s Robert O. Keohane discerned a fourth debate between what he termed a rationalist and a reflectivist IR approach – terms which again are adopted here for presentational purposes only. They entertained different views, among others about whether objective knowledge exists and about the foundations upon which they based their knowledge.

The rationalist research agenda is found in both neoliberalism and neorealism as reflected most prominently in the works of, respectively, Keohane and Kenneth Waltz (1924–2013). Although their theoretical outlooks differ, these scholars share the assumption that substantive rationality – described as “behavior that can be adjudged objectively to be optimally adapted to the situation” (Keohane 1988, p. 381) – is a useful analytical tool. Its utility may be illustrated with Keohane’s own research agenda, which sets out to explain how international institutions, like NATO, influence states’ behavior and cooperation. To this end, neoliberals study “the purposive behavior of relatively small number of actors engaged in strategic bargaining” (Keohane 1988, p. 379). Focusing on a limited number of variables and assuming actors behave rationally, scholars propose under which conditions such actors cooperate and how they can benefit from international institutions. Keohane is no advocate of law-like theories but still encourages scholars to undertake empirical research in order “to develop a cumulative verifiable knowledge . . . [ and] conditional, context-specific generalizations” (1988, pp. 379–380).

In contrast, the reflectivist IR approach emphasizes human reflection, interpretation, and meaning in world politics. Referring to Richard K. Ashley, Friedrich Kratochwil, and John G. Ruggie, Keohane argues: “To them meaning comes prior to behavior and is therefore as important to study” (1988, p. 381).

Like Bull in the second IR debate, reflectivists oppose using natural sciences as an ideal for the study of international affairs. Ashley (1984) is particularly critical to rationalists who build theory on the assumption that actors are rational. This, he argues, is a flawed idea based on a positivist understanding of science that he sums up in a few key points. First, positivism holds that science shall offer objective knowledge about reality. It unfolds its objects of studies by identifying structures, key variables, and causal relations between them. Second, positivism requires that science provides knowledge that allows people to make predictions and take efficient action to achieve desired outcomes. Third, positivism demands that theories and scientific hypotheses are tested in empirical studies. By adopting this positivist understanding of science, it follows that rationalists must exclude from the analysis human subjectivity in the sense of meaning, perceptions, values, and norms. Instead, rationalists assume that social actors, primarily states and larger social groups, act in a purposive-rational way that can be objectively understood; and that the actors do so in contexts understood as a set of objective external constraints. Accordingly, when rationalists undertake case studies their task is to objectively identify the most relevant external constraints, actors’ pre-given ends and their rationality. Based on such data rationalists calculate, uncover causal relations, explain, and predict behavior (Ashley 1984).

In contrast Ashley finds that international relations must be studied with approaches fundamentally different from those used in the natural sciences. To him the difference is not primarily methodological, as Bull argued, but more profoundly a question of epistemology – of what counts as knowledge. Ashley (1984, pp. 249–252) strongly advocates IR to move beyond positivism and instead draw from recent theoretical developments in the social sciences. From these ideas “Poststructuralism” emerged as a new theoretical perspective and the major opponent to its mainstream schools of thought (see “► [Poststructuralism in International Relations: Discourse and the Military](#)” by Baumann in this volume).

Kratochwil and Ruggie (1986) also criticized the underlying positivism of rationalism and, more specifically, neoliberals’ idea that international institutions can be studied as bargains between rational egoists in situations defined by a set of objective and constraining variables. This approach falls short of understanding why actors cooperate the way they do, because it cannot account for the norms, and meanings formed by states and international institutions. Subjects are treated as objects, and norms are treated as variables. This is a mistake since “[t]he impact of norms within international regimes is not a passive process, which can be ascertained analogously to that of Newtonian laws governing the collision of two bodies” (Kratochwil and Ruggie 1986, p. 768). In even more blunt terms: norms do not cause effects “in the sense that a bullet through the heart causes death” (Kratochwil and Ruggie 1986, p. 767). Norms are intersubjective – i.e., they exist between subjects – and can inspire, guide, and express mutual expectations. Norms can also be ignored, but this does not necessarily invalidate them, rather their standing will be influenced by other actors’ reactions to such violations. From this outlook Kratochwil and Ruggie present international affairs as a social fabric and use interpretative approaches to clarify the communicative functions of norms and ideas.

Keohane appreciates the reflectivist critique as grounded in the philosophy of science but warns against continued elaborations “about epistemological and ontological issues in the abstract” (1988, p. 382). Instead, he invites his opponents to join forces, combine insights, and develop a third IR approach. Some scholars took up on that invitation and eventually established Social Constructivism as a new mainstream IR school of thought, which they presented as a middle ground between rationalists and reflectivists approaches (see Agius’ “► [Social Constructivist International Relations and the Military](#)” here).

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## Philosophy-of-Science Questions to IR and Military Sciences

Sookermany, editor-in-chief of this handbook, argues that despite deep historical roots military sciences remain relatively undefined, and he calls for scholarly efforts to improve this shortcoming. Supporting this endeavor the purpose of the last part of the chapter is to draw from scholarly experiences in the field of IR to inspire developments in the embryonic academic discipline of military sciences. He proposes to begin by asking basic philosophy-of-science questions – notably from its four branches of teleology, ontology, epistemology, and methodology. Since their

content is a source of controversy, this chapter applies his account of the branches summed up in the four respective questions: what is the purpose of the academic discipline? what is the discipline's subject matter? what counts as knowledge in the discipline? and, how shall scholars in the discipline study the subject matter? (see Sookermany's "[► Philosophy of Military Sciences](#)" in this volume). These questions are now addressed in turn.

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## What Is the Purpose of the Academic Discipline?

Teleology is a branch of philosophy of science concerned with the purpose of a subject matter. Here, it will be conceived along Carr's slightly different lines to clarify prominent IR scholars' divergent and often implicit views on the discipline's purpose. Carr clearly disagreed with the first generation of scholars' academic motivation to abolish war, but he also found it natural that: "The initial stage of aspiration towards an end is an essential foundation of human thinking. The wish is father to the thought. Teleology precedes analysis" (2001, p. 8). In 1939, his main goal was to reorient the discipline to include theorizing on power politics.

Arguably teleological considerations were part of all the abovementioned debates and influenced by their contemporary geo-political contexts. The emergence of nuclear weapons and the Cold War spurred particularly US policymakers to engage academic communities in the broad effort to avoid a nuclear world war. In this context the purposes of Kaplan and other scientists in the second debate was to establish IR as a scientific discipline that could explain and predict international dynamics, while traditionalists like Bull aspired to understand the same dynamics and the moral dilemmas they involved. During the third debate, scholars challenged realism's dominant position in the discipline. As reflected in the subtitle to Keohane and Joseph S. Nye's principal liberal work *Power and Interdependence: World Politics in Transition* (1977) they aimed to provide alternative paradigms to better explain different political dynamics. US policymakers, largely informed by the realist school of thought after World War II, increasingly went to liberals for guidance during the 1970s. This political reorientation at that point in time, according to Wæver (1992, p. 82), can be explained by a militarily less tense Cold War, the shortcomings of US military force in the Vietnam War, and Washington's desire to lead the world by means other than military. Reflectivists' purpose in the fourth debate may be seen as an effort to align IR with developments in other social sciences. An important reason why they gained momentum may have been the shortcomings of rationalist approaches to make sense of the fundamental geo-political alterations following the "New World Order" proclaimed by the Soviet Union's and the United States' respective presidents in the late 1980s.

Using IR's experiences to answer the initial and simple teleological question "What is the purpose of the academic discipline?" suggests that such purposes change and that they change according to context in which they exist. Hence, in the further development of military sciences scholars may be inspired to explore how and why the purposes of military sciences have changed over time and in different

regions of the world. Moreover, Cox's critical position that "[t]heory is always for some one, and for some purpose" (1981, p. 128) should inspire scholars to follow up on their findings by reflecting on which political interests, societal dynamics, and academic fashions have shaped these alterations.

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## What Is the Discipline's Subject Matter?

The ontological philosophy-of-science perspective orients attention to the nature of the discipline's subject matter. So, what is international relations? There is no clear answer to that question either. The third debate alone offered three radically different answers. To briefly recapitulate: According to realists international relations is, a power struggle between states in an anarchic international system; according to liberalists it is a cobweb of competitive and cooperative relations between innumerable actors in economic and other fields; and according to structuralists international relations is driven by global structures that reinforce unjust relations between the world's *have* and *have-nots*. The fourth debate questioned whether IR's field of inquiry *is* something in any objective sense of the term. Some reflectivists argue international relations are socially constructed phenomena – i.e., that the field's meanings vary with what subjects make of it from one era to another and from one area of the world to another.

Using these academic experiences to develop the military sciences inspire to reflect on which paradigms different scholars draw from when they explain what the military *is* and to compare competing paradigms. Further, attention can be given to whether scholars portray the military primarily in objective terms or as a socially constructed phenomenon? The answers, whether implicit or explicit, to these questions matter, because they shape understandings of the military. In this manner ontological questions can be used as analytical tools to clarify assumptions about what military sciences study.

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## What Counts as Knowledge in the Discipline?

The epistemological perspective focus on questions like: How can one know? What counts as knowledge? Such epistemological considerations were part of Carr's efforts to balance the discipline's wishful thinking with historical analysis, and of Bull's later warning against adopting natural sciences ideals in IR which would limit the scope of valid knowledge to what could be mathematically proven or deduced from logic. Should such a view prevail, he argued, the academic discipline will offer only a poor and remote understanding of international relations. Epistemology was even more central during the fourth debate. Here reflectivists criticized rationalists for presuming that international relations exist in an objective sense and that it is a scholarly task to provide objective knowledge about causal relations between variables in that field of study. Rather, to properly understand international relations

reflectivists advocate approaches that scrutinize the meaning-contexts in which practices of international relations come into being.

Moreover, asking: what counts as knowledge? directs attention to the theories and approaches being used and begs the question: what is theory? This chapter illustrates that IR scholars disagree also on this point. To Kaplan, theory is a statement about law-like causal relations between variables that explain and predict actors' behavior, much like Newtonian mechanics offer universal laws about objects: "if A, then B." Accordingly, IR scholars shall strive to provide objective knowledge upon which other scholars can build. Bull disagreed: No such cumulative theoretical foundation exists in IR. Scholars can learn from each other but must build their own theories from the foundation up. Banks takes a different view, however. Scholarly communities cluster around and generate knowledge within paradigms. Banks seems to assume, that although paradigms highlight different aspects of world politics, scholars select their empirical evidence from the same objective reality. In the same vein Waltz presents theory as a picture, mentally formed to depict the organization of a system and its parts. Yet, he stresses that "no one can ever say that it is *the* reality. . . we can never be sure that a good theory will not be replaced by a better one" (Waltz 1979, p. 9). Still, he works on the assumption that international relations objectively exist.

Reflectivists take issue with that assumption. They acknowledge the world exists but note that people cannot make sense of it without language and traditions of interpretation (Campbell 1992, p. 69). And because researchers cannot access "reality" directly, IR cannot provide objective accounts, but only interpretations, of "reality." Such considerations have ethical dimensions. If the reflectivists are right, IR scholars cannot be objective. Scholars portray the field of international relations in the way they theorize about it. Thus, a common poststructuralist study would analyze how dominant discourses on a particular topic have come into being, with what effects, and whose interest they serve.

Asking what counts as knowledge in military sciences may reveal why such professional knowledge is little developed in academic terms. To this end, experiences from IR, including those briefly introduced here, offer some initial guidance to different ways this question can be explored.

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## How Shall Scholars in the Discipline Study the Subject Matter?

Finally, methodology is the philosophy-of-science branch reflecting on the many choices scholars make in the process of doing a particular study and the implications these choices will have for the findings. It addresses questions such as: How shall scholars study the subject matter? What considerations could, or should, scholars make when deciding how to gain new knowledge?

These questions were at the heart of the second debate spurred by the challenge from the self-labelled scientists. Aspiring to generate universally valid knowledge they had adopted the natural sciences' methodological ideals, which according to traditionalists would derail the discipline from the substance of international



relations. The controversy concerned the value of studying the field in objective and causal terms. Traditionalists argued such methods failed to account for international relations normative and subjective nature. The debate is relevant also in the military sciences. One could evaluate specific methodologies used for instance to study strategy or tactics, consider whether these methods resemble traditional or scientific approaches, and discuss their strengths and shortcomings to such ends.

The fourth IR debate also concerned new methodologies. Reflectivists introduced among other approaches, discursive and content analysis. Such methods may be useful to understand war in the cognitive domain, encompassing the realm of values, ideas and morals, and its implications in the physical domain. This appears relevant to military sciences if Clausewitz is right in saying that “[m]ilitary activity is never directed against material forces alone; it is always aimed simultaneously at the moral forces which give it life, and the two cannot be separated” (1989, p. 137).

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## Summary

This chapter has provided a broad overview of IR and to some of its key questions, major debates and characteristic features. The academic discipline provides several analytical perspectives that can be most helpful to gain better and competing understandings of the armed forces’ political rationale and to critically discuss common-sense assumptions about war and its utility compared to other dynamics in international relations. The chapter also illustrates how basic philosophy-of-science questions can be used to shed light on the different grounds upon which IR’s various schools of thought approach and picture international relations. This provides a framework to unravel the discipline’s many theoretical disputes at a more profound level than academic works tend to do. The chapter has brought to the fore that IR remains a Western-dominated discipline, but also stresses that theory is not neutral wherefor students should critically examine dominant theories’ relevance to other parts of the world and when necessary, develop perspectives better suited to understand specific regional contexts. In addition, the chapter’s structure with its focus on major debates and their relations to basic philosophy-of-science questions can hopefully inspire scholarly efforts to grasp and develop the military sciences as an academic discipline.

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## Cross-References

- ▶ [Liberal International Relations Theory and the Military](#)
- ▶ [Philosophy of Military Sciences](#)
- ▶ [Poststructuralism in International Relations: Discourse and the Military](#)
- ▶ [Realist International Relations Theory and the Military](#)
- ▶ [Social Constructivist International Relations and the Military](#)



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# Roots of Military Design

Jason Trew, Ben Zweibelson, and Daniel Riggs

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## Abstract

“Design” is as ambiguous as a concept as it is pervasive as a practice. This chapter takes a “big history” approach to illustrate how humanity has used design, informally and formally, to realize advantages through its strategic use of imaginative, integrative thinking. Indeed, because the nature of design is expediency, skilled practitioners are particularly adept at navigating and nudging complex, “wicked” environments. Since security challenges may be the most complex and

Ben Zweibelson was retired

J. Trew  
Air University, U.S. Air Force, Maxwell Air Force Base, Montgomery, AL, USA  
e-mail: [jason.trew@au.af.edu](mailto:jason.trew@au.af.edu)

B. Zweibelson  
US Space Command, Colorado Springs, CO, FL, USA  
e-mail: [ben.zweibelson.1@usspacecom.mil](mailto:ben.zweibelson.1@usspacecom.mil)

D. Riggs (✉)  
United States Army John F. Kennedy Special Warfare Center and Schools, Fort Liberty, NC, USA  
e-mail: [daniel.p.riggs@socom.mil](mailto:daniel.p.riggs@socom.mil)

consequential of all human endeavors, the discipline of design – including its origin story and recent evolutions – is relevant to modern defense professionals.

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### Keywords

Design · Design thinking · Military design · Innovation · Strategy · Cunning

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## Introduction

The most effective forms of warfare have therefore always included recognition of the inherent unpredictability that accompanies the use of force and built into military organization a tolerance to uncertainty and even a capacity to profit from it.

-Antoine J. Bousquet, *The Scientific Way for Warfare*

Design's capacity to deal with complexity and conflicting concerns is perhaps its most fascinating feature ... this ability to address complexity is inherently intertwined with design's resilience to reductive dichotomies. More specifically, it comes out of a hunch that a key reason we enjoy dichotomies so much in design is because they allow us to address conflict, collision, and contradiction, opening up new perspectives and potentials as a result.

-Johan Redström, *Making Design Theory*

All goods and services are designed. The urge to design – to consider a situation, imagine a better situation, and act to create that improved situation – goes back to our prehuman ancestors. Making tools helped us become what we are – design helped to make us human.

-Ken Friedman and Erik Stolterman, "Series Forward"

The world is "wicked once over" in that it is both dangerous and disorderly.

Defense professionals readily acknowledge the former because they regularly confront hazardous circumstances, and the use of organized violence for political effect is their reason for being. The latter refers to "wicked problems" that resist comprehensive or conclusive solutions because the context is confusingly dynamic and subject to competing interpretations (Rittel and Webber 1973, pp. 155–169). Those intimately familiar with complex security challenges increasingly recognize this second form of wickedness, as well as the corollary that traditional security concepts are only sufficient for "tame problems" (issues that are clearly defined and amenable to linear logic and reverse engineering).

The realization that competition in this century will require more sophisticated approaches has led to generic calls for "intellectual overmatch," including the ability to imagine new possibilities, to arrive at these new ideas in new ways, and to apply them in new contexts (Joint Chiefs of Staff, US Department of Defense 2020, p. 2).

There is much debate over how to accomplish these goals and very little consensus. Over the last several decades, however, rigorous explorations into these challenges have coalesced around new ways to think and act. This growing body of scholarship and practices is broadly known as military design (Wrigley et al. 2021), and the practitioners are often termed "military designers." The chapters in this portion of the Springer Handbook of Military Sciences represent the first

collaborative and scholarly attempt to summarize the emergence of this international movement in expanded form. The authors are either professional academics or warfighters, and, in many cases, they are *both* expert theorists and experienced practitioners. The result is a holistic overview of military design meant to spur their colleagues in the security enterprise on to further reading, reflection, and practice.

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## Wayfinding

Though each chapter can be read independently, this introduction offers a broad overview as a starting point for anyone new to this field or interested in the “prehistory” of design, a topic rarely addressed in popular writings. This sets up the following chapter’s more detailed history of how military design emerged from design writ large. That narrative focuses more on the modern period of history (i.e., the historiographical era following the European Middle Ages) and how, near the end of the twentieth century, some security professionals “designed design” to create a distinct movement.

In tandem, the first two chapters frame and contextualize all subsequent material in this section of the Springer project. For those less interested in the historical perspective, the remaining chapters serve as stand-alone guides to their specific topics. They address various forms of design praxis, in that the authors consider the form and function of the design applications, methods, and contexts, as well as the theoretical foundations these diverse designs originate from.

Altogether, these chapters survey the vast landscape of military design. The chosen vantage point, especially in the first two chapters, is intentionally broad, sacrificing details for a wider perspective. Still, there are no claims to being exhaustive or conclusive, either within a given subject or across this entire body of scholarship. To assert otherwise would not only be disingenuous, but also contradictory to the ethos of design. Put another way, these ideas about military design are – like the conditions they are meant to operate in – messy, evolving, and not without controversy.

Ultimately, this project is not about mapping terrain in order for readers to navigate known areas, nor is it about learning *how* to design, which some suggest ought to be framed as a “social technology” that can only be fully understood in practice (Liedtka 2000, pp. 7–8). These chapters, instead, are background information to equip individuals for the journey as they wander through the fog to sense the unknown or as they look toward the horizon to explore the edge of our current thinking. That expedition starts below, perhaps surprisingly, with reviewing the very nature of the human species.

## “Realizing” Advantage

While military design may be a recent expression, the spirit behind it is woven into all of military history and even the entire story of humanity. Our species is equipped with various capacities that allow us to navigate and nudge our environments. In addition to our physical and social skills, mental abilities emerged during what some call the cognitive revolution (Harari 2018, pp. 3, 31–37). With this change, *Homo sapiens* gained the skill of abstraction, representing ideas symbolically in language and mentally projecting themselves outside their immediate, perceptible circumstances. In short, imagination became a strategic advantage. Those individuals or groups who harnessed this intellectual gift better than others gained a competitive edge because strategy – what prominent theorist Lawrence Freedman calls “the art of creating power” (Freedman 2013, p. xii) – comes from “realizing” advantages in both senses of the verb: to be mentally aware of possibilities and to create, or actualize, the intended effect.

The duality of “realization” brings attention to the fact that the world we are applying our imagination to contains some elements that are internal and subjective with others that are external and objective. At the risk of overgeneralizing, art explores the first set, while science is oriented to the second. This contrast between what the novelist and scientist C. P. Snow referred to as the “two cultures” is broadly accepted in the West as an accurate division of knowledge. Indeed, each is often defined by its hostility to the other. Art explores the human condition, is qualitative, and synthetic. Science studies the natural world, is quantitative, and analytical. In addition to differing areas of focus, each tradition is further defined by how users *make sense* of the world through the questions it asks of its particular field of study, what constitutes valid answers, and what activities flow from those approaches (Burrell and Morgan 1979; Kuhn 1996). There is, however, a third way of understanding and acting upon the world that can be equally disciplined and distinct and is linked to our innate gift of creative abstraction – design.

Design operates in both the subjective and objective realms in order to conceptualize changes to the world intended to produce some advantage (Dorst 2015, p. vii). This is so integral to our existence that “designing constitutes being human” (Krippendorff 2006, p. 74) and design has been called a “fundamental form of human intelligence” (Cross 2006, pp. vi, 1). Moreover, this “first tradition” preceded art and science as one of the defining practices of our species (Dorst 2015, pp. 1–15). Humans, for example, conceived, constructed, and creatively employed artifacts, such as woven branches or stone tools, before anything about the process was “scientific” or “artistic.” Timely pragmatism – *realizing* an advantage, in other words – trumped systematic observation or controlled experimentation, as well as creative expression for its own sake. Yet, despite its prehistoric origins, design has not reached the same distinctiveness as a field of knowledge as art or science. This is partially because the term is used so widely and in so many ways, but also because the tradition is not as distinct from art and science as art and science are imagined to be from each other (Cross 2006, pp. 2–11).

To continue this broad introduction to design, it is useful to briefly compare and contrast design with the other two traditions. Like scientific endeavors, design focuses on answering questions through methodical processes. Unlike science, however, it does not require comprehensive explanations or repeatable solutions. Indeed, the very questions are different: science explores *what is* and design imagines *what could be*.

Differing orientations toward time further distinguish the two: science can wait patiently for its truths, but the relative immediacy of a design challenge requires some response, even if speculative and temporary. Also, scientific knowledge is generalizable, but design situates information – including the outputs of science – into specific contexts and sometimes does so in ways that are intuitive and therefore less explicable or open to standardization. This receptiveness to nonlinear, subjective, conjectural thinking makes design, to some degree, artful. Furthermore, design may employ artistic techniques as tools to make sense of ill-defined problems, which is what “designerly ways of knowing” evolved to address (Cross 2006, p. iv). It does so to suggest a practical advantage that does not currently exist, which is a goal art does not share. In other words, both appreciate originality, but for distinct reasons. Novelty is the context in which design operates as well as a necessary means to gain an advantage, either because each emerging scenario requires unique solutions or because surprise has instrumental value in a competitive environment. Originality is not, as it is for art, intrinsically valuable.

Finally, to use an even greater degree of abstraction, consider this final attempt to distinguish the three: whereas art is expressive and science is explanatory, design is *expedient*. In other words, it is oriented toward timely pragmatism and unapologetically embraces intuitive shortcuts (or what psychologists call heuristics) to imagine solutions that are not necessarily optimal but still sufficient. Designers, for instance, often employ nonlinear, conjectural reasoning in which prototypical ideas are quickly sketched (figuratively or literally) in iterative cycles of increasing fidelity in order to “capture, analyze, explore, and transmit” possible designs (Carlgren et al. 2016, p. 51; Dorst 2015, pp. vii–viii). “Expedient” can also indicate a degree of suitability for the moment (i.e., situational fitness), which foregrounds design’s emphasis on agile adaptation to the particular versus a comprehensive search for universally valid solutions. This is somewhat natural, since design expects, and moreover nurtures, dynamic emergence – even in the design process itself. Furthermore, the sense of expedience as opportunistic or exploitative invokes the moral ambiguity of “designing” and related words that share this embedded duality, such as planning, plotting, or scheming (Flusser and Cullars 1995, pp. 50–51). Perhaps an even more revealing synonym for design is “crafty,” which can mean both manipulating material as well as cunning machination. This further strengthens the point that design, which is an evolved capacity for agile action inspired by abstraction and imagination, offers a strategic advantage in our complex and competitive world.

To have this strategic effect, design is necessarily *integrative*, an adjective that is even more insightful than expedience. In one sense, this is about humble attempts to consider the totality of the circumstance in which an advantage is meant to operate in and upon. Designers will inevitably employ some analytical distinctions, but for

their results to operate effectively “in the wild,” they must always return to the perspective of “an integrated, complex whole that is not cleaved into clear, distinct, and separate taxonomies” (Nelson and Stolterman 2014, pp. 18–19). This orientation toward integration extends beyond how the situation is viewed and onto “designerly ways of knowing, thinking, and acting” (Cross 2006, p. 100). Design techniques, some of which are mentioned above, can be framed as integrating diverse perspectives, integrating solutions from dissimilar areas or past precedents, integrating the search for solutions with the understanding of the situation, or integrating disparate thinking styles in a single individual or in design teams. There is also integration in the sense of the executive skill that carefully assembles a portfolio of ideas, procedures, and perspectives for a specific situation.

In design, pragmatic results supersede strict adherence to a formal process. Thus, a multidisciplinary approach is natural; an ill-defined, open-ended problem necessitates an ill-defined, open-ended strategy. Indeed, design could be understood as not just multi- or interdisciplinary but “undisciplined,” because the artificial constraints inherent in academic paradigms have less authority when the focus is on finding what works. So, to craft advantages, designers adopt and adapt whatever information or methods may be useful, including those from art and science. Again, those “two cultures” emerged well after humans honed the innate “designfulness” we still employ daily, though somewhat unconsciously. The pervasiveness of design – our ever-present predisposition to “consider a situation, imagine a better situation, and act to create that improved situation” (Dorst 2015, p. vii) – may also contribute to its relatively hidden status.

The lack of widespread appreciation for design as a distinct and separate tradition does not mean this third culture has been static. Just as art and science have subdivided multiples times over, design has done the same, evolving well beyond the type of design that enabled humanity to advance from those humble origins. In time, multiple movements emerged, each with a varying affinity or aversion for movements in art or science. From the earliest distinct forms of design (e.g., architecture), design now includes industrial design, graphic design, organizational design, experience design, transportation design, process design, systems design, urban design, and many more. A full exploration of these activities, including their relationships to the core of design and to each other, is beyond the scope of this work. Instead, the following section sketches a rough historical context from which military design emerged and within which it continues to evolve today.

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## Making History

Over time, our species learned to exploit the opportunities and mitigate the dangers of a variety of environments. Toolmaking was central to this development, creating a positive feedback loop that functioned as both a cause and effect of human evolution. Of course, evolution has been, and always will be, interconnected with the physical, mental, social, and ecological dimensions of life.



As humans spread across the world from our origins in Africa, their settlements also grew denser, particularly after the “Agricultural Revolution” began in the area in and around modern Iraq (Christian and McNeill 2004, pp. 140–145; Harari 2018, pp. 77–78). Some places, by virtue of the environment, the number of people living there, and how those people were organized, were able to support the deliberate production of food. This was a function of imagination that involved deliberate exchange of materials between groups, domestication of selected flora and fauna, and thinking on a much longer time horizon for planning than required for a mode of existence based on hunting and gathering. Some theories assert an even greater role for the human capacity for abstraction and suggest, at least for some locations, ideological and cultural factors may have created the original impulse for agriculture (Christian and McNeill 2004, pp. 207–243; Harari 2018, pp. 89–90, 100).

Agriculture was neither a quick nor complete transformation, but for those areas that settled into the sedentary construct, some common innovations emerged.

Specialization is one example. In an earlier time, everyone did everything that anyone could do. The rise of civilizations, however, created a need and a capacity for individuals to focus on particular tasks that would, in sum, support the functioning of the entire group. This included efforts to produce food; to construct artificial environments to grow, water, or store food; to protect people and resources from internal or external threats; and to enforce various roles and their relationships to each other through bureaucratic, legal, and religious structures (Christian and McNeill 2004, pp. 245–252, 274–282; Harari 2018, pp. 99–103). In each of these cases, people realized advantages by imagining them in the mind and then implementing specific designs in the world. Traces of modern design are discernable in the specific cases in which individuals were directed to execute someone else’s idea, but there is little evidence this was a common distinction or that they consciously developed the expediency and integration associated with design. Regardless of the status of “design” at the time, material intervention, powered by imagination, continued to play a role as civilizations expanded east to Asia and west to the Mediterranean Sea.

Despite some Eurocentric tendencies in world history that suggest otherwise, all areas continued to experience technological, social, political, and economic innovations. Still, the intellectual history of the Anglosphere is influenced more by developments in the areas southeast of Europe, including their evolving attitudes toward design. One notable inflection point occurred in the city-state of Athens around the turn of the fourth century BCE. In the centuries leading up to this moment, oral traditions captured a holistic conception of wisdom and work (i.e., thinking *and* doing). Homer’s written version of these stories, *The Iliad* and *The Odyssey*, honored the practical intelligence of craftsmen. In Homeric epics, which played a key role in aristocratic education, it is possible to identify design in the thinking that informed material production. Moreover, because “designerly ways of knowing and acting” enjoyed an honorable reputation, metaphors of design were expected to inform everything from statecraft to morality. This integrated view, however, suffered a near-fatal blow from a young Athenian who went on to become the most influential philosopher in Western culture: Plato (Trew 2015, pp. 11–12, 21).

“The safest general characterization of the European philosophical tradition is that it consists of a series of footnotes to Plato” (Whitehead 1979, p. 39). A core tenant of his philosophy was the claim that “changeless, eternal” forms existed and could only be discovered through rationality. Most people, however, were incapable of seeing past the “shadows” of reality; only philosophers could discern and explain abstract truths (Stumpf 1995, pp. 58–59). In contrast, the “useful arts” of design were accessible, contextual, and based on tacit knowledge. Furthermore, Plato introduced a rigid hierarchy into his distinction of thinking versus doing, with the head literally and metaphorically above the hands, which were downgraded to mere instruments to manipulate the environment. This bias persisted as the locus of Western civilization shifted west to Rome and then north to Europe and then west again across the Atlantic. Indeed, at the risk of smoothing over a large span of history and counter-ideas, Plato planted seeds across the globe that would fully sprout centuries later in the Modern Era.

The transition from the Middle Ages to modernity is defined by a variety of interdependent changes occurring at different rates in various places and with different results. In general, however, there was a rediscovery of classical Greek and Roman philosophies, the emergence of the international system which sanctified the sovereignty of the state, and global exploration by the most powerful of those states.

Scientific advancements – which for some are the essential feature of this transition – included metallurgy, steam-powered machines, Newtonian physics, and the empirical process for discovering (really, *designing*) new knowledge itself, the “scientific method.” The focus on rationalism continued to build momentum in the subsequent “Age of Reason” and became “an unstoppable secular trend. . . expected to squeeze out emotions and romance, thereby removing intrusive sources of error and uncertainty” (Freedman 2013, p. 609; Bousquet 2009, p. 41). What was accurate and useful for mechanical systems was extended beyond the physical world: The concept of efficiency became a measure of human activity and some even claimed the entire universe could be understood as “clockwork” (Alexander 2008, pp. 1–3; Bousquet and Curtis 2011, p. 45).

## “Manufacturing” Design

Setting aside trends in intellectual history and the various periodization schemes based on those trends, the dominant mode of production across all civilizations remained relatively unchanged for a millennium after Plato. Despite his disparaging remarks, most work was accomplished by animal power, including that of *Homo sapiens*. Despite the increasing scope and depth of specialized labor, design was not a distinct activity; the *conception* of an artificial intervention was tightly coupled with its actual *construction*. Artisanal production was necessarily small scale and tailored to an individual’s gifts and resources as well as the means and desires of the user (which well may have been the artisans themselves). There was little impulse – or even practical instruments accessible – to rigorously codify knowledge, portions of which were largely tacit and intuitive anyway. Transmitting the craft tradition to future generations was done through lengthy apprenticeships. Something entirely

different, however, emerged with the Industrial Revolution that started in England in the eighteenth century.

Amidst the acceleration of technological innovations and the accompanying social, economic, and political changes, design finally emerged as a definable field of human activity. While historians of technology justly remind us that craft production continued (just as “obsolete” technologies persist well past their spotlight in conventional histories), work that was amenable to industrialization radically changed in character (Edgerton 2011, pp. ix–xvi, 52, 74). Rudimentary machines and the large capital investment to create them meant production became centralized in factories within which the manufacturing process was dissolved into repeatable, standardized steps. Society pivoted to respond to and support this shift, which increasingly delivered palpable changes to the human experience in multiple waves of industrialization that spread into other fields and other areas of the globe.

These trends further strengthened Plato’s separation of thinkers and doers. Traditionally, even well after he wrote *The Republic*, designing remained an integral piece of a seamless process of *realizing* advantage. Thus, in architecture – perhaps the first distinguishable subdiscipline of design, born of civilization’s demand for and means of creating artificial environments – the architect *was* the master builder. Plato’s division really took hold in the Industrial Revolution, which accelerated design in at least two new directions. One developed into the field of industrial design that engineered the increasingly sophisticated machines (indeed, design is related etymologically to “machine” (Flusser and Cullars 1995, pp. 50–51). The other, which was not formally identified as design until centuries later, was the management of the humans who operated among the mechanized coworkers. Again, the later field imported ideas of the former, with references to people as “cogs in the (organizational) machine” and efforts to find efficiencies through analytical reductivism (i.e., reducing all tasks to elementary parts presuming the whole is *no more* than the sum of its parts) (Bousquet 2009). In fact, at the turn of the twentieth century, “scientific management” became a “secular religion” and its prophet Fredrick W. Taylor preached the gospel of the “one best way” to approach any problem (McChrystal et al. 2015, p. 45). In the spirit of Plato, this wisdom was the exclusive domain of a few: “I have you for your strength and mechanical ability,” Taylor is often quoted saying, “We have other men paid for thinking” (as cited in Kelly 2018, p. 13).

Simultaneously, many of those involved with the design of material objects, including the built environment, were equally enamored with objectivity, rationality, and scientific approaches. One contemporary designer noted the shift, claiming “Our epoch is hostile to every subjective speculation. . . The new spirit, which already governs almost all modern life, is opposed to animal spontaneity, to nature’s domination, to artistic flummery. In order to construct a new object, we need a method, that is to say, *an objective system*” (emphasis added) (Vermaas and Vial 2019, p. 352).

Throughout the first half of the twentieth century, literal and metaphorical “industrialization” continued across multiple domains of human experience, beyond the obvious technological advancements. Educational theories, corporate structures, urban development, and even fiscal policy (in the aftermath of a Great Depression

caused by unrestrained market forces and mass panics) all reflected an impetus on rational, objective control by managers (Freedman 2013, pp. 460–461, 494–502).

Managers became the manifestation of Plato's declaration that people must be led by the intellectual elite. To support this new breed of professional, management thus became an academic discipline. Developments in social science and operations research inspired its mental models, goal-oriented and sequential planning became its mantra, and hierarchical organization became its means. Managers designed highly orchestrated courses of action to achieve preordained objectives and then directed others to execute their plans with no feedback mechanism to test assumptions or account for changing conditions (Liedtka 2000, p. 8).

A figure who aptly represents the spirit of this age, and who will come up again in the next chapter, is Robert McNamara. Previously a professor at Harvard Business School (an institution highly influenced by Taylorism), he later joined Ford Motor Company as it began modernization efforts in the 1940s. According to Freedman, McNamara and like-minded individuals "epitomized rationalism in decision-making, deploring reliance on intuition and tradition, and were unbothered by their lack of industrial experience." And they were rewarded for their stance. As a signal of the growing power and prestige now afforded to managers, the former accounting professor became Ford's president for a short period in 1960 before accepting a position in President Kennedy's cabinet (Freedman 2013, pp. 461–462, 501).

It was not just scientifically minded managers who enjoyed heightened stature in their field. Many professional designers continued to gain prominence by advancing the earlier trend toward a science of design. The same decade that McNamara was elevated into national politics, the design methods movement appeared and iconoclast Buckminster Fuller declared it the "design science decade" (Cross 2006, pp. 96–99).

The same trends imported into the business world – rationality, order, precision, and predictability – were applied to the design of industrial products, architecture, and urban areas. Herbert Simon's 1969 work, *The Sciences of the Artificial*, sought to establish "a body of intellectually tough, analytic, partly formalizable, partly empirical, teachable doctrine about the design process" (Simon 1996, p. 113). Notably, the author's background as economist, political scientist, and cognitive psychologist reveals what influences were considered relevant for designers.

His book is an insightful inflection point for capturing trends in design discipline. Simon and others increasingly promoted a *positivist design logic* in which problems are broken down into precise elements so that novel solutions could be created in the reassembly of the isolated parts. Yet, while *The Sciences of the Artificial* is often seen as the culmination of scientific design thinking, it would also facilitate a counter-culture design movement. Some began challenging the field's obsession with rationality and rigid reductivism and critiquing the industrialized methodology as insufficient and even counterproductive. Alexander, who worked at the forefront of the design movement of the 1960s, reversed his support for the positivistic approach and suggested designers should "forget it. . .forget the whole thing" (Alexander 1971, pp. 3–7). Papanek later described this as a schism between designers that

“are trying to make the design process more systematic, scientific, and predictable, as well as computer-compatible” and opponents who “follow feeling, sensation, revelation, and intuition. . . ‘seat-of-the-pants’ design.” In his opinion, the rational approach leads “to reductionism and frequently results in sterility and the sort of high-tech functionalism that disregards human psychic needs at the expense of clarity” (Papanek 1988, p. 4).

Similar doubts of pure objectivity and mechanical causality emerged elsewhere. New theories of complexity highlighted the nonlinearity of many systems (Bousquet and Curtis 2011); public policy experts looked for alternative decision-making models less dependent upon the ideal of pure rationality (Mintzberg 1978); urban planners developed the concepts of “tame” problems and “wicked” dilemmas to explain why economic logic often failed in the face of local political and social contexts (Rittel and Webber 1973, pp. 159–165); sociologists wrote about the social construction of reality (Burrell and Morgan 1979); and postmodernists highlighted the contingency of truth (Lyotard 1979).

The history of science was even reconceived in Thomas Kuhn’s highly influential work, *The Structure of Scientific Revolutions*. He argued persuasively that science advanced, in part, by nonrational factors including sensitivity to context, resistance to change, and a “leap of faith” toward a new paradigm when unexplainable anomalies in the current one created a crisis of confidence (Kuhn 1996, pp. 122, 154–157).

Kuhn’s explanation of paradigms was highly influential outside of his field. Indeed, society writ large seemed conscious of its position at the revolutionary moment in the Kuhnian cycle. The techno-rationalistic paradigm it had inherited increasingly appeared inadequate to describe the way the world worked or guide effective actions therein. Sanders describes the new paradigm as a shift from a deterministic universe of atomistic agents to a dynamic world of intersubjectivity; from rigid hierarchies to adaptive networks; from reductionism to synergism; and from rational and discrete planning to reflective practice and emergent opportunities. Keywords entering into Western discourse included holism, mutual causality, indeterminism, adaptive self-organization, and postmodernism (Trew 2015, p. 28). This was not just an academic exercise, however. In some cases, there were political, environmental, and humanitarian crises that cast doubt on the value of robotically adopting technological and scientific concepts into other domains of the human experience (e.g., the Watergate scandal, oil spills, acid rain, and the Challenger shuttle accident) (Hughes 2005, pp. 84–96; Pursell 2007, p. 134).

Amidst these changes, management – which, to reiterate, can be considered a form of design – reevaluated its mechanical processes, strict hierarchical structures, and its past basis in Taylorism. A softer approach gained influence, emphasizing subjective elements such as organizational culture as well as individual passion and creativity (Freedman 2013, pp. 551–556). One business book, inspired by sociology, declared, “The numerative, rationalist approach to management is right enough to be dangerously wrong, and it has arguably already led us astray” (Peters and Waterman Jr 1982, p. 29). Even the person who was credited with creating the discipline and who was so gratified to continue Taylor’s legacy, Peter Drucker, acknowledged the

limits of reason and endorsed nonrational factors such as intuition. He acknowledged that the separation of those who design plans and those who implement them was a “dubious and dangerous” construct and that adaptation to unpredictable context necessitated some degree of decentralization (Drucker 1986, p. 284). In 1973, the same year Horst Rittel and Melvin Webber introduced the concept of “wicked problems,” the oil crisis demonstrated the limits of corporate design to handle complex changes. Within a decade, Jack Welch led General Electric to abandon its highly formalized, highly analytical design process, rejecting the “endless quest by managers for a paint-by-numbers approach, that would automatically give them answers.” The chief executive also noted that “any cookbook approach is powerless to cope with the independent will, or with the unfolding situations of the real world” (Freedman 2013, pp. 503–504, 528). In response, Mintzberg noted that the most well-designed plans build in feedback so that “deliberate” intentions could be balanced with unforeseeable “emergent” factors (Mintzberg 1994, p. 111). Altogether, this “social turn” in the discipline reemphasized how to realize strategic advantage: Design is a learning contest reliant upon dialogue, experimentation, agility, and an even healthy dose of humility; design has never been a purely objective, scientific endeavor.

A better understanding of design essentially revitalized the subjective elements Plato denigrated centuries before. This, in turn, implied a need to explore more sophisticated descriptions of human cognition. Indeed, Simon himself contributed to the notion that rationality was, at best, “bounded” to specific cases outside of which we relied upon heuristics as expedients to decision-making (Cross 2006, p. 99; Dorst and Dijkhuis 1995, pp. 261–274; Simon 1982). The implication for design research was to explore, as the title of Bryan Lawson’s book clearly identifies, *How Designers Think*. By studying professional designers, scholars hoped to capture the essence of design, even as it continued to fracture into various subfields. Donald Schön, for example, highlighted the process of “reflective practice” including the essential role of deliberately and iteratively “framing” the problem itself: to “set its boundaries, select particular things and relations for attention, and impose on the situation a coherence that guides subsequent moves.” As this suggests, their work not only identified techniques (heretofore treated as nearly mystical and thus unstudyable), but also helped clarify the nature of design problems. “Artistic, intuitive” processes of “design thinking,” he continued, were the only appropriate response to situations of “uncertainty, instability, uniqueness, and value conflict” (Schön 1984, pp. 22, 49). Indeed, as these challenges plagued a number of fields, design thinking continued the trend – already operating in management theory – toward becoming “unbound” from its historical basis in the manipulation of material artifacts (Pendleton-Jullian and Brown 2018).

This did not mean that all versions of design pivoted to a new paradigm.

Industrial designers, who necessarily remained very “bound” in the physical world, continued to hone their engineering approach to realizing advantages. Indeed, in complicated systems – those amenable to reductivistic logic because their many parts involve known, stable causal relationships – it is useful and appropriate to

codify “best practices” into doctrine or checklists (Ackoff 1981; Cross 2006, p. 27; Snowden 2007, pp. 58–60).

Procedural knowledge certainly facilitates learning more efficiently than the time-honored tradition of craft apprenticeship. Efficiency is, however, meaningless, when there is no effectiveness. In other words, while there are certainly advantages to making otherwise unspoken processes explicit, there is a risk that tacit elements are lost or that doctrine is inherently obsolete because, as Ian Eishen offers, the “check-list is the best way we knew how to do something *yesterday*” (personal communication, December 12, 2021). The use of routinized wisdom should therefore carry a warning label that the information is perishable in the face of any complexity. Thus, when it does not match the context, designers must take the difficult step of “dropping their tools,” as sociologist Karl Weick writes. For many, one particular school of design has come dangerously close to misrepresenting the artistry of design thinking as a “miracle cure” (Carlgren et al. 2016, p. 39) using simplistic “Mad Libs” style, fill-in-the-blank poetry.

## Designing Mainstream Design

“Design Thinking,” herein distinguished from earlier, more generalized insights by its capitalization, emerged from noble intentions. Industrial design, though focused on complicated systems and engineered solutions, is still vulnerable to the “wick- edness” of the complex: products are imagined by humans, intended to realize advantage for humans, and constructed by humans. And humans, by nature, introduce unpredictable emergence into everything. Thus, even the most elegant technical design fails if it does not account for the human element. So, just as management began to integrate sociological factors, professional designers did the same (yielding further support to design as “integrative”). Methods, organized in categories titled as “empathy” or even “ethnography,” formed what has become known as “human-centered design.” As summarized by Dr. Ben Zweibelson, this evolution “shifted some of the purely analytic- based optimization mindset of industrial design towards subjective aspects of the complex social-economic qualities of the human condition. Here, empathy, multiple perspectives, paradox, and complex dynamic systems would soften industrial design” (Zweibelson 2019, para. 14). Other researchers highlight additional characteristics, including creative, conjectural thinking; promoting diversity of ideas and individuals; rapid iterations to visualize abstract concepts and to prototype solutions; a tolerance for ambiguous, risky situations; and reframing not only the initial challenge, but also reimagining rapid failure as important to a designful learning process. Harkening back to the start of this chapter, some note that it is the *integration* of these elements that may be “the key to understanding Design Thinking” (Carlgren et al. 2016, pp. 50, 53; Micheli et al. 2018, pp. 10–13).

However defined, by the end of the century, Design Thinking was well established in both the commercial and academic ecosystems of Silicon Valley. This was largely due to emergent leaders in each of those fields. In 2004, Stanford



University founded the Hasso Plattner Institute for Design (otherwise known as the “d.school”) to teach the design methods that had been successfully honed over the previous decades by the nearby design firm IDEO (Katz 2017, pp. 144–145). Other commercial and academic entities have since entered this exchange, but Stanford and IDEO remain the most influential. The result is that their particular style of design thinking has become commodified into Design Thinking.

This was not without costs, however. First, the distinction between design thinking and Design Thinking is rarely noted, leading to further confusion on design. Second, the history of design theory was omitted; as one analysis reported, “for most designers, design has no history” (Rodgers and Bremner 2017, para. 15).

Furthermore, to make it easier for nondesigners, complex methods were boiled down to formulas (numerous templates, including the “d.school bootleg,” are available online). This invites the same criticism levied against positivistic design. Peter Rowe, for example, writes in *Design Thinking* that “in the real world... we discover there is no such thing as *the* design process in the restricted sense of an ideal step-by-step technique” (Rowe 1998, p. 2). Moreover, as many organizations adopted a “linear, gated, by-the-book methodology,” they dulled the potential of design into a force that was capable of “delivering, at best, incremental change and innovation” (Nussbaum 2011, para. 4).

Naturally, some began wondering how design ever became so popular (Kimbell 2011, pp. 286, 293).

Even with (over)simplification, there is lack of consensus, with “stark conceptual divides over the very definition” of Design Thinking (Carlgren et al. 2016, pp. 40–41). Yet, despite all the downsides and debate, this democratization of design has been, arguably, still an important advancement. It gives real energy to the claim of many design researchers (and this chapter) that design is a “fundamental form of human intelligence” honed by professionals, but accessible to all (Cross 2006, p. vi). The scaffolding it offers eases the application for novices (though one that should support learning until it can be removed, as actual scaffolds are in building construction) and is an initial step toward new language, models, and methods to fully express design’s transformative potential. Finally, while the approach began with an orientation toward novel products and other commercial innovations, the empathic, human-centered approach is always relevant given that design is always done for, with, and through humans. It is, therefore, a positive trend to see Design Thinking moving across to new fields, including democratic governance, ecological resilience, personal wellness, and education, and up into higher echelons of organizations (Brown 2019, pp. 7, 37, 149; Kimbell 2011, p. 287; Micheli et al. 2018, pp. 1–2; 18; Nelson and Stolterman 2014, pp. ix–x). The integration of design into executive levels of business now links it explicitly with the scholarship on management, with some advocating that “design thinking needs to pervade everything business students do” (Dunne and Martin 2006, p. 522). Moreover, the trend has contributed to a greater appreciation of design and “designerly ways of thinking” as both “central to modern ways of working” as well as our entire “way of life” (Krippendorff 2000, p. 3; Lloyd 2019, p. 177).

To repeat an earlier criticism, what Design Thinking does *not* do is situate the discipline within history. Yet, design – as the mental conception preceding the



material intervention with the intent to create an advantage – has always been central to human existence. Granted, it lacked distinction until civilization and specialization intensified, giving rise to architecture as the first discernable design field. Eventually, the Industrial Revolution created the impulse to privilege rationally ordered manufacturing over artisanal production and two other distinct fields of design were born: industrial design and management. Numerous distinct fields of design also emerged, each with divergent sets of skills based on their medium, intellectual traditions, and a number of other idiosyncratic factors.

Admittedly, the diversity of current design activities stretches the conception of a singular, coherent discipline. Still, there is a common shared essence or what Wittgenstein called a “family resemblance” (Lawson and Dorst 2009, p. 24): They share tendencies toward integration and expedience to realize advantage in complex contexts that are not vulnerable to optimization or purely objective analysis (even if humans were capable of performing such feats). This includes an area of design – largely omitted from the scholarly or popular discourse on design – that not only participates in these crafty ways, but perhaps best exemplifies them: the use of design in warfare.

## Designing Advantage

Design and security are fundamentally intertwined, and the following chapter will expand on their connection, restoring the linkages deliberately omitted from the historical sketch above. For now, however, it is useful to briefly reflect on the generic language used in this chapter to introduce design, for it gestures to how the security context fits naturally into the (pre)history of the discipline. First, design is related to realizing advantage in dynamic environments. The links to security are obvious. The threat or use of force for political effect creates (or reacts to) conditions that are not only volatile, but decidedly consequential as well. The setting is arguably more complex and more vital than the commercial realm that design is more closely associated with, which is why military designers may gain insights hidden from those designing products, experiences, or managerial processes. Furthermore, this reconnects “design” to feigning, cunning, and manipulation. These are all synonyms (and implications) civilian designers tend to ignore (Wendt 2017, pp. 4–9) and connotations that bring generic design even closer to this handbook’s military focus.

Ultimately, among all its subfields, military design uniquely links the discipline to its historical function of leveraging imagination for strategic effect. This relationship may be clouded by the timing in which the phrase “military design” first appeared. As the next chapter will detail, the term gained usage in the late twentieth century, implying it was simply another offshoot of the design discipline as it was splitting into many different directions. In actuality, the way design thinking has been used for warfare is more independent, having developed with – and influenced – all human history. In other words, even though it is often ignored by civilian designers, the use of design in military contexts is closer to the origins of design and how it realizes advantage in wicked contexts through integration and expedience. Indeed, military designers test their craft in the most wicked of human endeavors: the use of

organized violence for political effects, which is eternally cursed – as Clausewitz hauntingly reminds us – by the paradoxical “trinity of friction, chance, and uncertainty” (Gray 1999, p. 41).

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## Cross-References

► [Designing in Security Affairs: An Introduction](#)

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# Military Behavioral Sciences: An Introduction

Irina Goldenberg

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## Abstract

This chapter provides an introduction to the Military Behavioral Sciences section of the Handbook of Military Sciences. The importance of this domain and its contributions to understanding the armed forces, and military personnel in particular, is underscored. This is followed by a discussion of the breadth of the field of military behavioral sciences, the main research topics of focus, as well as the disciplines most often applied to study them. The evolution of this field of study is outlined, along with the main stakeholders engaged in this research, including academia, military and governmental scholars, think tanks, and others. The chapter concludes by offering some thoughts on the future of military behavioral sciences.

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I. Goldenberg (✉)

Director Research Operational and Organizational Analysis, Director General Military Personnel Research and Analysis, Department of National Defence, Nepean, ON, Canada

e-mail: [Irina.Goldenberg@forces.gc.ca](mailto:Irina.Goldenberg@forces.gc.ca)

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Military personnel · Armed forces personnel · Military behavioral sciences

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**What Is Military Behavioral Science and Why Does It Matter?**

Merriam-Webster (2021) defines a military as “of or relating to soldiers, arms, war, or armed forces.” A pat definition for most readers of this handbook, who know well the multifaceted and complex nature of the “military.” A military is the sum of the human behaviors composing it, after all, and the human behavior defining any institution is too multifarious and intricate to be captured in a dictionary definition. Of course, some humility may be in order because even those of us who study military behavior find it difficult to circumscribe – let alone define – all the subjects, disciplines, and activities that fall under the heading *military behavioral sciences*. All the same, this chapter attempts an introduction to military behavioral science for the Military Behavioral Sciences section by discussing the research topics, disciplines, and organizations within the field, the evolution of the field as whole and the main players engaged in this research, and offers some conjectures on the future of military behavioral sciences.

As one can tell from the chapters in the *Handbook of Military Science* (Sookermary, 2021), part of the Military Behavioral Sciences section, military behavioral science comprises a large set of disciplines, including military psychology, military sociology, military anthropology, and the behavioral aspects of biology, economics, geography, law, psychiatry, and political science, as well as a broad set of subjects related to human behavior within the military, such as military ethics, military readiness, operational performance, and military leadership. Given the multidisciplinary nature of this field, all the approaches, methods, and tools used cannot be covered in an introductory chapter. Suffice it to say that the methods employed in military behavioral sciences are as many and as various as the methods used in each discipline and subdisciplines composing it – if often tailored to the military context (e.g., Bowles & Bartone, 2017; Caforio & Nuciari, 2018a, b; Carreiras & Castro, 2013; Kümmel & Albrecht-Heide, 2000; Soeters et al., 2014). The component chapters within this section will address specific methods, tools, and approaches as applicable.

The impetus for studying the military through behavior is simple enough: Military behavior is human behavior. From the strategic levels of military planning, to the operational and tactical levels, human beings conceive, develop, and implement all military activity. Even the material elements – such as weaponry and equipment – are identified, designed, developed, procured, and trained on can ultimately be understood through human behavior. As Dank and Dank (2016) put it: “Any attempt to understand warfare – its causes, strategies, legitimacy, dynamics, and resolutions – must incorporate humans as an intrinsic part, both descriptively and normatively. Humans from general staff to ‘boots on the ground’ play key roles in all aspects” (p. 1). This insight is not been missed by militaries themselves, with most armed



**Fig. 1** Select military behavioral sciences topics

forces subscribing to the mantra that personnel are their most important resource. Not coincidentally, perhaps, personnel also make up a large portion of military budgets. The majority of NATO militaries spend at least a third of their budget on personnel. A recent study showed that the cost of total military spending related to military personnel ranges from a low of 33.4% in Luxembourg to a high of 74.8% in Portugal (Santamaría et al., 2021). In the United States, the costs of personnel payments and benefits alone comprise about 40% of the military budget (Office of the Undersecretary of Defence, 2020), and in Canada the largest proportion of the budget is allocated to personnel (Department of National Defence, 2020).

While a definition is not easy, a list of the topics under the umbrella of military behavioral sciences is illustrative (see Fig. 1). Some of these interrelated topics are as follows: personnel generation, including attraction, recruitment, selection, training, career management, and retention of military members; the military profession, socialization, and military professional education; personnel planning research to inform armed forces' human resource requirements and decisions; the study of military members working conditions and how these impact elements such as morale, motivation, and cohesion; military identity, culture, and leadership; human performance including the various physical and physiological factors that interact with the human body to affect behavior; diversity (e.g., gender integration, minority groups, generational differences); human aspects of deployment, operational stress, pre-deployment preparedness, and post-deployment reintegration; focus on military families (e.g., effects of families and on families, support mechanisms); understanding the human aspects that influence adversaries and/or drive threats (e.g., ideology, social, cultural, physical, informational, and psychological elements that influence

adversaries' motivations, thinking, and activities); group dynamics (e.g., multinational collaboration; inter-service approaches; whole of government elements); military-civilian relations or what is often called democratic control of the military as well as relations between military and society (e.g., media, public opinion); and focus on military veterans and transition following military service. These are some examples. Also of note, and not surprisingly given the breadth and multidisciplinary nature of this domain, elements that fit under the umbrella of behavioral military sciences are also related to other research fields, including those covered in other sections of the Military Sciences Handbook [e.g., chapters "Women in the Military: Changing in Representation and Experiences," "Military Families: Topography of a Field," "Military Profession," "Civil-Military Relations: What Is the State of the Field?," "Military Leadership," and "Military and Society"].

Much of the work in military behavioral sciences falls under the banner of the social sciences (e.g., chapters "Military Psychology," "Sociology of the Military," and "Anthropology of the Military"). Yet other fields of inquiry contribute to the study of behavior in the military: Physiology, human performance and human factors, and operations research (OR) are prominent members of the military behavioral sciences family (see chapter "Role of Analytics in Military Workforce Planning"). Human performance research studies a host of environmental and physical stressors on human behavior and performance, such as altitude, isolation, heat, cold, humidity, and aridity (chapters "Environmental Stress in Military Settings" and "Training-Related Stress and Performance in the Military"). Human factors, sometimes also referred to as human engineering, human factors engineering, or ergonomics, focus on the design and testing of equipment to increase safety and effectiveness (chapter "Military Psychology").

## Levels of Analysis

The complexity of human behavior invites a variety of perspectives. A common way of classifying perspectives on human behavior in a broader institutional context is levels of analysis – into the macro, meso, and micro levels. *Macro-level* research on military behavior focuses on broad social structures, such as the relation between the armed forces and society or the military as a social institution. How does the political system influence military leaders, for example, or how does the mandate of a mission interact with the culture of the host nation to affect relations with host nationals? At the *meso-level*, the group is the level of analysis, including both formal and informal groups. How does leadership style at the division or battalion level influence morale and cohesion, for example, or what are the differences in subculture and tradition among the military services and how do these influence outcomes such as gender integration? The *micro-level* focuses on the individual within the organization and society. For example, how do different marketing campaigns influence the propensity of individuals from different backgrounds to join the military? How does one's military identity influence organizational commitment and retention in the armed forces?



Military behavioral sciences research usually focuses on one of these levels. Level of analysis is often related to the topic being studied and, as a result, the discipline through which the topic is examined usually determines the level of analysis. Psychologists will tend to study micro-level behavior, for example, while sociologists study meso-level behavior. Naturally, inquiry at one level can obscure the understanding of a phenomenon at another levels. In response to this, researchers increasingly use multi-level analyses to enrich our understandings of phenomena in military behavioral sciences (Goldenberg & Soeters, 2014).

## Disciplines and Multidisciplines

Disciplines that study human behavior – such as psychology, sociology, anthropology, and political science – have developed sub-specializations focusing on the military (Scott et al., 2018a, b) that have coalesced into an independent field. The study of the military in general, and military behavioral sciences in particular, began with early psychometric tests used to inform World War I war efforts, followed by wider applications and more disciplines in World War II and again in the Vietnam War. The end of the Cold War and the rapidly evolving technological and sociological changes have further impacted the military and its personnel. In concert with these developments, military behavioral science topics, questions, and areas of inquiry evolved and expanded into the latter half of the twentieth century, expanding again in the twenty-first into a broader range of disciplines and subdisciplines (e.g., psychobiology, social and cultural anthropology, and behavioral economics; Caforio et al., 2018; chapter “Military Psychology”).

Research in military behavioral science has become highly multidisciplinary and research groups interdisciplinary to reflect the complexity of human behavior and the multiple perspectives required to understand it. As Kuemmel (2006) observed, the reasons for this interdisciplinarity stem from “the simple truth that the military is a highly complex social phenomenon in itself and one that cuts through various levels, touches different context and is thus subject to multiple processes of interpretation” (p. 417). Thus, researchers are still trained in specific disciplines, but at the practical level scholars and researchers in military behavioral science often collaborate with other disciplines on projects (Scott et al., 2018a, b).

Naturally, comparative approaches are also used to study topics and phenomena in the military behavioral science, including comparative studies of past and present military organizational structure, conflicts, and approaches to war as well as comparisons across modern militaries along a variety of dimensions (Scott et al., 2018b). Lessons learned through comparative study can lead to novel perspectives and insights and a more comprehensive understanding of phenomena of interest. Comparisons across contexts, nations, or other important dimensions can identify gaps in knowledge and point to new directions of inquiry. Comparative research goes hand-in-hand with collaborative research because it often involves sharing tools, methods, approaches, and research processes across disciplines and nations.

## **Who Conducts Military Behavioral Research and for Whom Is It Conducted?**

Given the applied and consequential nature of this field, there is a range of individuals and organizations engaged in conducting military behavioral sciences research, ranging from stakeholder or defense-sponsored research conducted on behalf of military organizations/stakeholders to more independent research conducted by universities and other more independent players such as think tanks. Further, who conducts the research is related to what specific topics are studied in the first place, the research approaches used, as well as how the research is disseminated and applied, as will be elaborated in the sections below.

### **Research Directed and Sponsored by Defense Establishments**

In the twentieth century, defense establishments (most notably the US Department of Defense, then the War Department) called on social scientists to provide empirical research for military decision making. One of the first large-scale applications came from American psychologists in World War I. The mass mobilization of American recruits required some means of matching soldiers from this diverse group to a wide range of roles and to do so quickly. A group of psychologists led by Robert Yerkes produced a series of intelligence tests modeled on those developed by Alfred Binet that could be efficiently administered to large numbers of recruits entering service (chapter “Military Psychology”). These tests allowed the US military to sort recruits into different roles.

Perhaps the most recognized government-sponsored behavioral science research during World War II is the work of Samuel Stouffer, who was hired by the US Department of Defense to implement field surveys of more than half a million soldiers in the United States and in combat theatres in Europe and the Pacific. These surveys focused on soldiers’ attitudes about the war across a wide range of domains, from racial integration to performance, and were based on the premise that a soldier’s attitudes are important predictors of behavior and, ultimately, of operational success (Scott et al., 2018b). World War II also saw the need for solutions to equipment and weapons, which led to the rise of a new scientific discipline called operations research. Operations research applies advanced analytical methods and techniques to assist in military decision making and has since continued to evolve and remains vital to military planning.

Defense establishments continue to commission military behavioral research across a broad range of capacities. Extensive research programs have evolved to provide scientific intelligence to manage what are often referred to as personnel resources. The US Army Research Institute (ARI, [n.d.](#)) for the Behavioral and Social Sciences’ mission, for example, is “to drive scientific innovation to enable the Army to acquire, develop, employ, and retain professional Soldiers and enhance personnel readiness.” ARI’s origins can be traced back to the inception of military psychology, with a meeting of experimental psychologists at Harvard University in 1917, who would go on to develop scientific tools for personnel selection, classification, and

performance testing. This group grew into the Committee on Selection and Classification of Military Personnel, the predecessor of ARI, which was stood up at the start of World War II to advise on soldier selection and classification. Following World War II, ARI expanded its behavioral science research to training, human engineering, social psychology, and physiological psychology. At present, ARI develops measures, methods, and models to maximize personnel and unit readiness, develops theories and investigates new areas in behavioral and social sciences, and conducts scientific assessments that inform human resources policies (ARI, 2021).

In Canada, similar research is conducted by the Director General Military Personnel Research and Analysis (DGMPRA), which “provides an integrated personnel research program for the Department of National Defence and the Canadian Armed Forces, addressing both strategic and operational research needs” (Department of National Defence, 2021). The DGMPRA research program is organized into the following domains: personnel generation research (e.g., selection and assessment, recruitment, retention); personnel and family support research (i.e., conditions of service and work environment, diversity and gender integration, support to ill and injured members, military family research, military transition and veterans); and individual and organizational effectiveness (e.g., human dimensions of operations, unit morale and cohesion, leadership, culture, and ethics; Goldenberg, 2018). Like ARI, DGMPRA matured out of the foundations of precursor organizations, most recently the Directorate of Human Resources Research and Evaluation (DHRRE), which replaced the Personnel Research Team (PRT), which itself had replaced the Canadian Forces Personnel Applied Research Unit (CFPARU).

Moving to several European examples, the Bundeswehr Center for Military History and Social Sciences (ZMSBw) is a German military agency and research facility that conducts research on military history, military sociology, and security policy. The center employs a multidisciplinary group of researchers, including historians, political scientists, psychologists, sociologists, and others. As with ARI and DGMPRA, the ZMSBw evolved out of other organizations (i.e., the Military History Research Office and the Social Science Institute of the Federal Armed Forces; Bundeswehr, 2021). Similarly, the Defence Research Establishment (FFI) is the primary institution responsible for defense-related research in Norway, including research in behavioral sciences. As with the other examples, the FFI provides empirical research and recommendations to the Ministry of Defence and the Norwegian Armed Forces. Its research spans a broad range of domains, but there is a strong behavioral science component (Ministry of Defence – Norway, 2021).

Research that is directed or sponsored by military organizations is, above all, characterized by its applied nature. In other words, it must address the question of “So what?” As McFate et al. (2012) aptly noted, “The military, as a customer of social science knowledge, wants to apply whatever they learn to solve problems in a timely, practical manner. Knowledge that cannot be applied may be very interesting to a commander and his staff on a personal level, but is essentially useless in the context of the mission” (p. 102).

## Research in Military Educational Institutions

In addition to these organizations managed and funded by national armed forces, most nations also conduct behavioral science research through the activities of their military educational institutions (e.g., Royal Korean Military Academy, Royal Military College of Canada, United States Military Academy at West Point, Finnish National Defence University, and Swedish Defence University). The primary objective of these colleges and universities is to provide professional military education, including the socialization of new members as well as academic leadership training and accreditation in higher education for military officers as they progress through the ranks. Staffed by military professors and civilian academics, these institutions also conduct military behavioral sciences research through their master's and doctoral programs in sociology, psychology, and political science. Research produced by these institutions is often shared with their defense establishments and published in the scholarly literature.

Researchers in defense establishments and military academies also collaborate with their peers in allied countries. In 2008, a group of military academies formed the International Society of Military Sciences (ISMS) to “further research and academic education in military arts and sciences in the broadest sense” (International Society of Military Sciences, 2021). ISMS focused on the armed forces of small and medium-sized nations on the assumption that these institutions lacked the capacity to examine all topics of interest to them. Pooling resources and sharing information through this international network would enable broader coverage and enrich the study of all the militaries and their security challenges. Since its inception, ISMS has informed the development of research programs and enabled the type of international comparative research noted above (Bon & Feichtinger, 2020).

## Scholarly Research in Civilian Universities

While defense establishments sought empirical insight for their decisions, the subject matter falling under the umbrella of military behavioral sciences has proved rich enough to draw the interest of civilian scholars and researchers. As discussed above, civilian scholarly and scientific research provided the expertise and established the legitimacy of the disciplines in military institutions (Scott et al., 2018a, b), and military behavioral sciences has evolved into a broad range of subdomains through the research of university scholars who are independent of their nations' armed forces and defense establishments. Many universities have academic centers focused on war, security, defense studies (e.g., Defence Studies Department King's College London; Centre for Security and Defence Studies, Carleton University, Ottawa; Center for Military Studies, Copenhagen University).

## Think Tanks, Networks, and Others

In addition to university scholarship, a variety of national and international networks and think tanks have also proliferated. The most well-known might be the RAND Corporation, which is a large-scale international organization that aims to conduct empirical, non-partisan, and objective research and analysis across a range of important complex policy areas. Although RAND Corporation is not focused exclusively on military research, this is one of its core domains, as evinced by the standing up of several defense and security subdivisions (e.g., Homeland Security Operational Analysis Centre; RAND Army Research Division; RAND National Security Division), and has produced extensive research across the full spectrum of military behavioral sciences topics. Notably, RAND focuses on applied problems and on the provision of recommendations policy and action. Although RAND receives significant funding from sponsors and clients, it is also supported by philanthropic benefactors, and places strong emphasis on scientific objectivity as well as rigor by subjecting all of its publications and recommendations to a rigorous scientific review process (RAND Corporation, 2020, 2021).

A few other examples include the Centre for Defence and International Security Studies (CDiSS), a British defense and security think tank, the International Centre for Defence Studies (ICDS) based in Estonia, the Canadian Defence and Security Network (CDSN), the Philippines Defense Forces Forum, and the Centre for Security Studies (CSS) in Bosnia and Herzegovina. Although these organizations differ in a variety of ways, some common objectives include advancing the body of knowledge in defense and security studies; providing independent research recommendations to improve policy-making (i.e., without formal allegiances to the armed forces) by identifying and analyzing national security and defense challenges and proposing policy solutions; serving as conduits between various research groups and other stakeholders (e.g., between the academic community, the government, and defense and security industries) to improve cross-sector information sharing; organizing knowledge dissemination events such as conferences and seminars, as well as through scholarly and general publication and social media; supporting new generations of scholars; and informing the public on issues related to defense and security.

Many disciplinary organizations have also evolved subdivisions focused specifically on military issues, often to do with the military behavioral sciences. For example, the appetite for psychological contributions to the field of military behavior led the American Psychological Association to stand up the Division of Military Psychology (Division 19), which was one of the first formal American Psychological Association subdivisions and was stood up in 1945 following the significant contributions of military psychology in relation to World War II (Laurence & Matthews, 2012).

## Does the “Who” and the “For Whom” Matter?

As is evident from the preceding discussion, variety of individuals, groups, and organizations engage in military behavioral science research. These include military officers and civilian personnel working for the armed forces, scholars and professors in civilian and military universities and other educational institutions, and researchers working in a range of public and private organizations. The organizations, systems, programs, and processes related to military personnel and the variety of contexts in which these operate within the military and in relation to the broader society is complex and multifaceted. DGMPPRA researchers, for example, collaborate with researchers from other militaries, domestic public health agencies, public and private veterans’ agencies, private opinion research firms, and research centers in civilian universities. The variety of players and perspectives is necessitated by the scope of the military’s activities and its complex relationship with the rest of society.

An in-depth analysis of the different approaches or actors is beyond the scope of this chapter. But the different parties have general strengths and weakness by virtue of how they are positioned to contribute. The most notable distinction is between publicly funded (usually military-funded) social scientists and independent researchers, such as those at civilian universities and think tanks. On the one hand, the former work for the institutions they study – perhaps an immediate red-flag against the ideal of independent empirical inquiry (Redden, 2020). Clearly, researchers affiliated with the armed forces are less able to choose their research topics because they are generally required to focus on the topics that interest the armed forces. Moreover, the empirical insights gleaned from internal research are less widely shared and less likely to contribute to the overall knowledge base because they are mostly communicated through internal reports and briefings rather than published in peer-reviewed scientific literature. At the same time, this “client-responsive approach” is more likely to reach senior policy and decision makers and, all things being equal, is more likely to influence military strategy, policy, and practice.

Academic researchers, on the other hand, have greater autonomy with respect to their research focus, or, as Caforio et al. (2018) put it, they are able to conduct “research for the sake of research.” It is also generally supposed that those not working for the armed forces are freer to criticize the military. In contrast to internal researchers, moreover, academic research is more likely to be shared with the scientific community and to be published in peer-reviewed journals, thereby contributing to the knowledge base. At the same time, external research is generally peripheral for decision-makers and practitioners and is, therefore, less likely to be communicated to – let alone taken up – by decision-makers. External research is also more likely to involve theory, including analyses using particular theoretical lenses. Research sponsored by the armed forces, meanwhile, tends to be less theoretical, more pragmatic, and linked to specific military priorities and concerns, making it more likely to impact armed forces’ practices, programs, and policies.

Various approaches to closing this internal-external gap have been developed. The Minerva Research Initiative, stood up in 2008, builds connections between external social scientists and the US military. The program is funded by the Pentagon

and US Air Force and Navy to advance the military's understanding of key issues related to military and society (Redden, 2020). In Canada, the Innovation in Defence Excellence and Security (IDEaS) program was established to foster "open innovation to provide creative thinkers with the structure and support to encourage solutions." Essentially, IDEaS curates scientific research and findings produced by academia and industry that are relevant to the Department of National Defence (Government of Canada, 2021).

Another consideration with respect to "the who and for whom" is related to access. Gaining access to military facilities and to military personnel is certainly much more readily facilitated by those working for the armed forces, or at the least, those whose research is supported and endorsed by the military. This is certainly the case in garrison or on the home front, but is even more consequential when considering research conducted in theatres of operation. For independent scholars, access to research in and on the military has been shown to be a dynamic process of negotiation, one which can have considerable implications for the development of the research in the first place (Navarro, 2013). Indeed, it has been argued that the extent of the researcher's integration in the research context affects not only the feasibility and process of obtaining data but may also affect its analysis (Carreiras & Castro, 2013).

## Networks and Organizations: Bridging the Divide

A number of networks and organizations have been established to provide a forum for collaboration and exchange in the military behavioral science domain, bridging the divides among the various subgroups discussed above. These formal and informal networks and organizations have also contributed to the increased multidisciplinary and use of comparative approaches in military behavioral science research. Among the earliest was the Inter-University Seminar on Armed Forces and Society (IUS) initiated in the United States by Morris Janowitz. Established in the 1950s as a grassroots network, the IUS has grown into a "forum for the interchange and assessment of research and scholarship in the social and behavioral sciences dealing with the military establishment and civil-military relations." It is "based on the premise that research on military institutions is best conducted across university, organizational, disciplinary, theoretical, and national lines" (Inter-University Seminar on Armed Forces and Society, 2021). The IUS created the *Armed Forces and Society* journal, one of the most authoritative peer-reviewed, interdisciplinary, and international journals focused on military establishments, civil-military relations, operations, security, and related topics (Sookermany et al., 2017).

In 1986, the European Research Group on Armed Forces and Society (ERGOMAS) was established. Many ERGOMAS members participated in IUS, but were dissatisfied with what they believed to be an unbalanced emphasis on the United States, overshadowing the key questions and concerns in other Western militaries (Scott et al., 2018a, b). Initially, ERGOMAS was organized into thematic working groups that focused on the questions and concerns about European militaries and, like the IUS, emphasized interdisciplinary and comparative perspectives.

Over the years, ERGOMAS has become more international, with leadership and membership from every region around the globe (European Research Group on Military and Society, 2021).

A number of other international networks and organizations have been stood up to share information, tools, and methods, as well as to engage in comparative research and collaboration. Some of the most notable in the behavioral sciences domain include the Armed Forces and Conflict Resolution Research Committee, or RC01 (part of the International Sociological Association), which is rooted in sociology (Armed Forces and Conflict Resolution Research Committee, 2021), and the International Military Testing Association or IMTA (International Military Testing Association, 2021), which is rooted in psychology. The International Studies Association or ISA (International Studies Association, 2021) is not focused on the military specifically, but it is an important venue for political scientists and international relations scholars who study the military. There is significant overlap among the members across these organizations, though there are some informal distinctions. While the IUS is certainly international, for example, it is still more US-centric than the others and focuses more on political science and international relations. The IMTA, originally created to focus on personnel testing, now has a much broader scope and the “topics currently addressed, encompass most facets of behavioral sciences applied to the military. These include selection, classification, training, morale, mental health, leadership, family issues, security and military aspects of human resources, human factors and human effectiveness” (International Military Testing Association, 2021).

In addition to these international academic forums and organizations, armed forces-led and funded organizations also exist to enable cross-national research and information sharing in military behavioral science. Like their national counterparts, these international organizations generally respond to the priorities of the armed forces. NATO’s Science and Technology Organization’s (STO) Human Factors and Medicine (HFM) Panel, for example, supports international research on health, human protection, well-being, and human performance in operational environments. STO-HFM research focuses on the physical, physiological, psychological, and cognitive compatibility among military personnel, technological systems, missions, and environments (NATO Science and Technology Organization, 2021). Similarly, The Technical Cooperation Program (TTCP), a partnership among the Commonwealth nations of the United Kingdom, Canada, Australia, and New Zealand as well as the United States, supports personnel and psychology research through its Human Resources and Performance (HUM) group (TTCP, 2021). The research and technology collaborations under the European Defence Agency (EDA) also sponsor defense research through capability and technology (CapTech) groups. Human and behavioral research is conducted under the CapTech CBRN and Human Factors division (European Defence Agency, 2021). As noted by the TTCP, such partnerships enable “the sharing of ideas and the harmonisation of programs. This gives member nations the potential to extend their research and development (R&D) capabilities at minimal cost, to avoid duplication and to improve interoperability” (TTCP, 2021).



## Concluding Thoughts and Future Directions

Military behavioral science research is first and foremost an applied discipline. Although there are core and perennial questions that confront military organizations in regard to the human behavior, the focus of military behavioral science is largely guided by what the military needs at a given time or in a given context. These needs evolve over time and in tandem with political, social, economic, and technological changes. Mastroianni's (chapter "Military Psychology") remark about military psychology applies to military behavioral sciences generally: "Military psychology is what military psychologists do, and what military psychologists do is determined by military needs. Military needs change in unpredictable ways. Military psychology, then, is nothing more than the institutionalized capability to apply specialized skills and knowledge to military problems" (*this volume*).

The need to understand human behavior in militaries has resulted in the rapid evolution of the topics studied, the disciplinary lenses applied, and the diversity of players involved. Interdisciplinary collaboration and international partnerships have become common. The trend toward complementarity and mutual reliance not only saves resources but also enables the exchange of insights and scientific methods and approaches. It is undeniable that this has narrowed the gap in getting evidence-based information to decision-makers across the armed forces. Still, research is not always used by leaders or practitioners in the best way. There is much room to advance the science-policy interface and to optimize approaches for communicating empirical findings to influence practice and policy. It has been suggested that all scientists be conscious of the research-policy connection when approaching and communicating their research (Goldenberg, 2019).

Militaries evolve with the world around them and the missions assigned them. Continued internationalization of the operational context, technological advancements, and growing national diversity are some of the aspects that compel the armed forces to adapt. In recent years, this has meant that most have become smaller but with more "permeable boundaries" with society, particularly regarding the increased diversity and the greater use of reservists and private military contractors. The changes driving the evolution of the military profession also place demands on military personnel, shaping their roles, needs, training, and perspectives. Further, these developments also affect military-civilian relations, which are highly consequential in areas such as recruitment, legitimacy, and nations' monetary and non-monetary support to operations (Caforio & Nuciari, 2018a, b). Military behavioral sciences are thus as relevant as they have ever been and will continue to evolve in concert with these developments.

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## Cross-References

- ▶ [Civil Military Relations: What is the State of the Field?](#)
- ▶ [Dynamic Intersection of Military and Society](#)
- ▶ [Military and Gender Issues](#)
- ▶ [Military Families: Challenges and Opportunities in Turbulent Times](#)

- ▶ Military Profession
- ▶ What is Military Leadership?
- ▶ What is Military Sciences?

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# History and Development of Military Psychology

George R. Mastroianni

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## Abstract

Psychology is widely thought to have emerged as a scientific discipline only quite recently: at the end of the nineteenth century. Psychological thinking had nevertheless been occurring for millennia, and such thinking formed a significant element of Greek philosophy in the centuries before the Common Era. The Greeks, no strangers to war, applied this thinking to military matters, such as learning, motivation, and the roles of environment and heredity in human development. From these beginnings, the systematic study of the unique considerations that arise when humans come together in military undertakings began. The industrialization of warfare that began in the nineteenth century added new

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G. R. Mastroianni (✉)  
United States Air Force Academy, Colorado Springs, CO, USA  
e-mail: [grm17@psu.edu](mailto:grm17@psu.edu)

questions and problems, problems which became more urgent just as the novel application of the methods of science to human psychology became institutionalized in universities in the decades before World War I. Today, military psychology is a vibrant and dynamic field that focuses on a core set of stable and enduring areas of study that include leadership, personnel selection, training, human factors, human performance, and clinical psychology. As military technology and the nature of warfare continue to evolve within the context of national and social institutions that are themselves constantly in flux, military psychology will adapt to encompass the new questions and problems brought by these changes.

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**Keywords**

Military psychology · Military history · Military medicine · Human factors · Human engineering

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## Introduction

Psychologists around the world contribute to military institutions and operations as serving members of military forces, as civilian members of defense establishments, and as a broader community of scholars, researchers, and practitioners. Psychology now plays an essential role in many areas of military life, and the discipline is institutionalized in most military establishments. Before exploring the scope and nature of the roles played by military psychology today, it is worthwhile to briefly consider the connection between psychology and the military in historical context.

Most introductory psychology textbooks date the origins of psychology as a scientific discipline to 1876 (or thereabouts), the year that Wilhelm Wundt founded his psychology laboratory in Leipzig. William James' *Principles of Psychology* appeared in 1890 and became an early and influential work defining the boundaries of the new field. If psychology itself only coalesced as a field in the late-nineteenth century, it stands to reason that there could have been no *military* psychology before that date because there was no *psychology*. But if we take a broader view, and accept the long history of reflection about human nature and the practical knowledge about human conduct and affairs accumulated over the centuries as a kind of psychology, then we can identify connections between psychology and military life and affairs long before the end of the nineteenth century.

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## History of Military Psychology

One of the earliest sustained discussions of the psychology of military members occurred more than 2000 years ago in several of Plato's dialogues, especially the *Republic*, which lays out a basic psychology and the psychological development of a military guardian class within the context of an idealized city-state (see Carpenter 2010; Robinson 1995). Plato (trans. 1969) divides the psyche into three parts: a rational part (reason) and two irrational parts, the emotions and the appetites.

Reason, the weakest part, Plato compares to a charioteer being pulled by the two horses of emotion and appetite. Emotions are distinguished from appetites to the extent that some emotions – e.g., the desire for honors, a sense of pride and shame – act as countervailing forces to the appetites. Self-restraint, for example, is understood as the work of emotions like shame or pride subordinating the appetites. While everyone has all three parts of the psyche, one part tends to dominate the other two and motivate one's life course. For most people, the appetites dominate, and they will seek out a pleasant life. Only a tiny minority are ruled by reason, and they will seek out a life of quiet contemplation. But there is a small group in whom the emotions dominate, and they will seek out a life of honor and social status.

In Plato's city, that smaller group in whom emotion rules and who seek a life of honor is selected and trained from a young age to become members of the military guardian class. In addition to physical and martial training, members of the guardian class receive a moral education that satisfies their longing for honors through an identity as guardians of the state and its laws. Their guardian identity would be reinforced and protected from temptation by social arrangements that played double-duty as reinforcers of group solidarity and morale. The guardian class would live communally in common barracks devoid of luxuries and private property and with women and children of the class being held in common. It is worth noting, as feminist scholars have (e.g., Tuana 1994), that women were also members of the guardian class to be selected, educated, and trained with the men. Finally, any child born into the guardian class without the requisite psychological disposition would be demoted to the appetitive (civilian) class; anyone born to the civilian class who displayed the psychology of a guardian would be promoted into the guardian class.

We can see in Plato's account echoes of the selection, education, and training of today's military professional. Obviously, modern militaries are subordinated to civilian governments, and military members are not forced to live communally. But they are segregated from civilian society during their formative period to develop a military identity that includes distinctive dress, symbols, codes of conduct, ceremonies, and histories. They are encouraged to internalize a specifically military ethos defined by duty, honor, self-discipline, service before self, and to think of themselves as guardians of the state, its people, and its laws (Plato, trans. 1969).

The guardians of Plato's *Republic* bear a strong resemblance to the ruling class of Sparta, the leader of a coalition of city-states that defeated Athens in the Peloponnesian War. Like all Greeks, the Spartans fought in the *phalanx* formation, the integrity and success of which depended heavily on the social and psychological bonds between soldiers. The life of every soldier depended on the actions of the soldier to his immediate right. The success of Greek arms was determined in part by the maneuvers taken on the day of battle. But the larger part of the iceberg lay in the years of social, psychological, and cultural conditioning every Spartan soldier experienced. Unlike other Greek city-states, whose armies were composed of citizen-soldiers, Sparta had a professional army (Marrou 1956). At the age of seven, young male Spartiates (members of the military ruling class) were initiated into the *agoge*, a brutal physical training regimen that prepared them for military training when they became adults. The boys lived in barracks with a troop of other

boys on a poor diet to encourage them to steal and hunt for food. Once they reached adulthood, the young men were inducted into the Spartan army where they began military training and where they would remain until they were 60 (Cartledge 2003). Contemporaries observed that the long years of martial training made Spartans into a more resilient and disciplined fighting force capable of campaigning longer and harder and performing maneuvers that other Greek armies could not (see, e.g., Xenophon, trans. 1925). The legend of Spartan culture and character have come down through the ages as illustrating the putative ennobling benefits of rigorous discipline, directly connecting individual and social development with military prowess. The very word “Spartan” conjures images of discipline and asceticism, and “laconic” (derived from Laconia, the region in which Sparta was located) describes terse and economical speech for which the Spartans were famous.

The Greeks also understood the effects of warfare on soldiers. Jonathan Shay sees in the Homeric epics an understanding of the effects of combat trauma on soldiers today. *Achilles in Vietnam* (Shay 1994) and *Odysseus in America* (Shay 2003) use these ancient texts to explore moral injury (Shay’s term) experienced by some veterans as a result of their experiences in battle. Shay’s integration of these ideas into therapeutic approaches to help struggling veterans is a direct connection between modern and ancient understandings of military psychology.

Even before the rise of scientific psychology in the late nineteenth century, recognizably psychological principles and practices were applied to military problems. Principles of learning, for example, were applied to ensure the development of needed skills: Repetition and automatization guaranteed that soldiers could still perform under the stress of combat. The Greeks understood that warfare demanded certain concessions to human nature, and they developed efficient and effective fighting forces by integrating military service into a fabric of social, political, and legal systems that enmeshed the individual in a web of relationships that justified, validated, and determined each soldier’s role.

## Leadership

Leadership has always been an essential element of a military. Leadership includes motivating soldiers, persuading them of the value of the things for which they are asked to fight, equipping them with the mental and physical tools they need to fight and win. As we have seen, leaders have, since ancient Greek times, used political, social, and cultural bonds to establish the psychological conditions that make the management of fighting forces possible. That fundamentally psychological aspect of warfare continued to be vital after psychology emerged as a scientific discipline in the late nineteenth century. Technological, economic, and political developments that gathered steam at about the same time as psychology’s institutionalization would lead to an expansion of psychology’s role in selecting, training, and preparing soldiers for military service and war as the twentieth century progressed. While technological developments have played some role in the development of clinical approaches to help soldiers affected by their wartime experiences, Shay’s work

illustrates the essential continuity between ancient and modern times in terms of the psychological effects of combat trauma on soldiers and those around them.

Kurt Lewin, sometimes regarded as the father of modern social psychology, initiated experimental studies of leadership in the late 1930s (Lewin and Lippitt 1938; Lippitt 1940). The formal study of leadership as a multi-disciplinary academic subject began to take shape after World War II. An excellent historical summary and survey of contemporary leadership theory may be found in *Leadership: Theory and Practice* by Peter C. Northouse (2018).

Before the emergence of scientific psychology in the late nineteenth century, there existed at least three domains in military affairs in which pre-scientific psychological thinking and practice were employed: (1) the selection, training, and preparation of soldiers, (2) the use of psychological and social influence to create and sustain cohesive, committed fighting forces (leadership), and (3) an understanding of the effects of combat trauma on soldiers and approaches to ameliorate those effects. We shall see that the disciplinary portfolio of modern military psychology now encompasses an even broader range of concerns, but that these three early areas of military psychological interest remain firmly embedded in modern approaches, as well.

## **The Industrialization of Warfare and the Growth of Scientific Military Psychology**

Industrialization in the nineteenth century and the mechanization in the twentieth century dramatically transformed warfare. This transformation occurred more quickly and completely in some places than others, but the American Civil War and the First World War were early steps on a trajectory of technological change that would, within the space of little more than a century, move the warrior's perspective from the back of a horse to the seat of a supersonic jet fighter and put levels of destructive power that once could only be amassed by nations at the fingertips of single individuals. It was during the early years of this transition, between the end of the American Civil War and the beginning of the First World War, that scientific psychology became institutionalized.

A comparison of the American Civil War with the First World War reveals the staggering scope of technical innovation in the machinery and methods of war that were underway as psychology was emerging as a scientific discipline. The muzzle-loading muskets of the American Civil War were replaced by small-caliber, high-velocity breech-loading bolt-action small arms that could be accurately employed at substantial ranges and could fire several shots without reloading, a process that could be accomplished autonomously by the individual soldier. Machine-guns capable of firing several hundred rounds per minute became available. Balloons were used in a very limited way for aerial observation in the American Civil War, but by the time of the First World War, there was a sophisticated aerial warfare program that included tactical and strategic bombing and aerial operations against naval targets. Railways were used to move troops during the American Civil War, but by the First World War the invention of internal combustion engines led to trucks for mobility and tanks for



offensive action, though horses continued to play a significant role in warfare through the end of World War II. Poison gas was used as a weapon on a large scale in the First World War.

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## **The Development of Military Psychology as a Field and Present Applications**

The field that we know as military psychology began with the First World War. While the role played by psychologists in World War I was relatively limited, it set the stage for a dramatic expansion of participation by psychologists in the Second World War. Psychology was growing as an academic and scientific discipline, the pace of change in technologies that would soon be applied to military problems was accelerating, and the staggering scope and scale of the conflict ensured that there would be ample opportunity for psychologists to apply their knowledge and skills in the war effort.

By the end of World War II, the general contours of the discipline of military psychology would emerge. It is important to bear in mind that military psychology is a naturally dynamic field. There are core problems and concerns that have always been and will always be part of military psychology, such as human performance under stress. But social and cultural change led to intense interest in racial and gender integration in the military as social and political progress opened military service to groups that had hitherto been excluded. Technological progress has naturally shaped those areas of the discipline that are concerned with the soldier-machine interface. During World War II, these concerns centered on military hardware: “software” as we know it today did not exist then, but producing software that soldiers can use effectively in combat today is an important task to which military psychologists contribute. The very nature of warfare itself shifted after World War II, as large-scale conventional conflict gave way to so-called brushfire wars during the Cold War, limited wars that would not trigger global nuclear conflict. These wars brought new ways of fighting, and new problems to military psychologists. This is all as one would expect, because military psychology is an applied discipline. While there may be (and is) a core set of stable questions and problems confronting military organizations and personnel amenable to psychological study, there will also be questions and problems coming and going as political, social, economic, and technical change alter the military landscape.

What follows is a brief discussion of the core areas of military psychology that arose (or continued to develop) during World War II. The questions, problems, demands, and issues associated with these areas helped frame the development of military laboratories and other organizations, and civilian academic programs related to military psychology in the decades after the war. These areas represent the stable core of issues that have defined military psychology since its emergence as a discipline, and are likely to remain key foci of the discipline for the indefinite future. Military psychology is what military psychologists do, and what military psychologists do is determined by military needs. Military needs change in unpredictable

ways. Military psychology, then, is the institutionalized capability to apply specialized skills and knowledge to military problems.

## Selection

Technical innovations in the first half of the twentieth century created new demands on the military personnel who would employ the new weapons and tools of warfare. Existing technologies already required a range of skills and abilities. Nearly four million men entered the military as part of mobilization for World War I in the United States. For example, the US population at the time was a bit over 100 million. The diversity in background, health, education, literacy, and social experience in these four million was staggering. Military leaders needed to match this diverse group to a diverse set of jobs as quickly as possible.

The contribution to World War I for which psychologists are best remembered is in the area of personnel selection. In the United States, many prominent psychologists joined the war effort. A group led by Robert Yerkes produced a series of intelligence tests modeled on those developed by Alfred Binet that were administered to large numbers of soldiers upon entry into the service. These tests were called the Army Alpha and Beta tests. The Army Alpha Test was administered to literate soldiers, while those who could not read or write were administered the Beta Test. There was also a provision for individual examination. The intelligence tests produced for the American armed forces were used extensively in schools in the decades after World War I. Psychologists helped in selection efforts elsewhere, as well: Paul Fitts reported that “the first psychological testing center for the armed forces was established in Germany in 1915 for the selection of motor transport drivers” (Koonce 1984).

Aviation was a prominent and visible example of a new military capability that introduced an unfamiliar and comparatively complex technology into warfare, a technology that made significant demands on its human users. It became clear quite early that while a fairly large proportion of recruits and draftees might be trained to load and fire rifle, flying an airplane was a different matter: Some were much more likely to be successful than others, and the cost of putting the wrong person in the cockpit could be quite high. The involvement of psychologists in the selection and training of aircrew occurred as early as the World War I (Monacis 2007) and aviation psychology remains today one of the major subfields of military psychology.

## Training

As military technology became ever more complex, the development of effective and efficient training systems became more and more important. Training methods were developed and evaluated by psychologists, and programs of instruction were optimized to produce the best performance with the lowest investment in time, money, and personnel. Defense establishments expanded dramatically in a very

short time during World War II, placing staggering demands on training systems and organizations to satisfy the demands of the rapidly growing forces. Technological innovation continued to create new equipment and systems that brought new training demands: Radios were not widely used in World War I by ground or air forces, but provided the backbone for tactical communication in World War II, for example. The war years produced a blizzard of innovative new technology: Devices like radar and sonar were brought into service as practical and valuable equipment, but each new invention or development brought with it demands for new training.

Psychologists contributed new technologies to training: Fred Keller, a close associate of B. F. Skinner, designed operant-learning-based training programs for learning of Morse Code, for example. Such reward-based systems, in which the learner typically works through training materials that break the tasks to be learned into manageable sub-tasks that must be mastered before moving on to the next, may now be found in many e-learning applications. Keller's Personalized Systems of Instruction, or PSI, also called the Keller Plan (Eyre 2007), which incorporated principles derived from studies of operant conditioning, later saw limited use in education. While PSI never achieved significant penetration in education, elements of the system are often found in military training programs and settings.

## Human Factors

Psychologists played an important role in the selection and training of personnel, and often the roles for which individuals were being selected and trained involved the use and operation of equipment of various degrees of novelty and complexity. In general, the equipment development process did not provide a role for the participation of psychologists or others whose expertise lay with those factors related to the utilization of the equipment by the intended user rather than the equipment itself. During and after World War II, however, the equipment design and testing process in many military establishments began to include a consideration of the "human factor." The logic of this development was simple. Adapting and matching the features of a device or piece of equipment to the user early in the development process (rather than trying to adapt the user to the equipment after the fact) resulted in better performance and safety. Out of this consideration have emerged several fields of specialization related to human factors, human engineering, human factors engineering, and ergonomics (Casey, 1998; Norman, 1988).

Controls and displays were an early area of emphasis, sometimes leading to the pejorative characterization of early human factors efforts as "knobology." The configuration and placement of switches, knobs, dials, levers, buttons and so on chosen for a piece of equipment can have dramatic effects on both safety and performance. Human sensory capabilities are such that information displays, such as gauges, indicator lights, and computer screens, must be carefully configured to ensure that the size, color, clarity, contrast, are such that human beings can process the information needed from them under operational conditions.

Operating complex equipment involves perception and motor input and responses that interact directly with the design of controls and displays, but there is also an important cognitive element that must be taken into account. Human information-processing structures our interaction with equipment. Some items of information may need to be checked or monitored more often than others, for example. Information may be needed and responses may need to be organized into sequences that would make some structural and functional features more congruent with human cognitive processing than others.

Aircraft displays offer an excellent illustration of these considerations. Operating an aircraft involves the simultaneous monitoring and management of many systems: flight controls, engine status, fuel management, and navigation, to name only a few. The “real estate” on an aircraft instrument panel is crowded with controls and displays related to these and other systems. How should these displays be configured? Maintaining control of the attitude, altitude, and speed of the aircraft are very high on the pilot’s to-do list, and so the primary flight instruments providing information on these parameters are normally presented prominently and centrally in the pilot’s view, often in the same spatial relationship to one another across aircraft types. This makes it easy for pilots to develop a habitual and repetitive cross-check to maintain situational awareness of these vital parameters.

Other systems may be just as important contributors to flight safety, but may monitor items that change much more slowly than aircraft flight parameters. Certain engine-status indicators may be examples of items that are checked less often, and so may occupy a more peripheral location. Modern aircraft contain elaborate warning systems that alert pilots when values begin to deviate from the desired range. The pilot’s attention will be drawn to the appropriate information, which might provoke a look at a related instrument: this natural sequence of actions should be supported by a deliberate placement of sources of information that will facilitate, rather than hinder, the acquisition of needed information quickly.

## **Human Performance**

World War I was the first major conflict to occur after scientific psychology appeared, and the earliest instance of psychologists officially recruited to support the military and the war effort. But the roles played by psychologists were still quite limited. World War II brought about a massive mobilization of all sectors of society in support of the war effort. Psychologists were part of this total effort, and the breadth of contributions of psychologists during the war laid the foundations for the development of military psychology once victory had been achieved.

World War II was a global war, fought in a wide range of climatic and environmental conditions, year-round for nearly 6 years. The explosion in new technology placed soldiers in conditions in which humans had previously had little or no experience: Aviation and submarine warfare had been in their infancy during World War I, for example, but played important roles in World War II. The effects of factors such as altitude, isolation, prolonged exposure to heat, cold, humidity,

aridity, and a host of other environmental and physical stressors on human performance came to be of great interest to a military establishment confronted with the need to conduct world-wide operations. Since World War II, military forces have engaged in more varied conflicts in diverse climates and environments, such as Korea, Vietnam, the Middle east, and Southwest Asia.

Planning and preparing for operations in diverse environments requires information about the performance capabilities of soldiers in these different circumstances. Soldiers operating in very hot environments, for example, face significant physical challenges. Understanding how these challenges may affect soldier performance is crucial to leaders who must plan operations that are consistent with soldier capabilities. Soldiers operating in severe cold have nutritional requirements that are significantly different from those of soldiers working in warmer conditions: leaders must be aware of these special requirements and incorporate these considerations into their planning. In the United States, the US Army Research Institute for Environmental Medicine operates specialized facilities that permit the recreation of extreme climatic conditions in the laboratory, permitting researchers to study the effects of environmental stressors on human performance. Similarly, Defense Research and Development Canada uses specialized facilities that can simulate extreme environmental conditions varying in altitude and temperature, among others, to enable the study of the impact of a wide array of stressors on human performance in operationally relevant scenarios. Such studies are used to develop models of human performance that can help leaders ensure that soldiers are properly equipped and supplied for the demands that they face, and that operational plans are formulated with a clear view of human performance capabilities in mind.

## Clinical Psychology

Military service, and especially the experience of combat, can lead to positive personal growth. Many people who experience war integrate their experiences into positive and productive lives. But many also suffer devastating and long-lasting consequences as a result of their experiences in the military. We have already mentioned Jonathan Shay's use of Homer as a way of addressing some of these consequences in a contemporary context. The now-common term posttraumatic stress disorder (PTSD), which became an official diagnosis in 1980, had its origins in attempts to understand the struggles of Holocaust survivors and later Vietnam veterans (Herzog 2019). But we can also identify earlier attempts to grapple with the mental health consequences of the experience of combat and trauma.

During the American Civil War, soldiers who suffered from mental and behavioral symptoms that we might now suspect as symptoms of PTSD were thought to have something called "soldier's heart" or "nostalgia." During World War I, soldiers with such symptoms were described as suffering from "shell shock." In World War II, "battle fatigue" or "combat fatigue" were terms often applied in these circumstances. These terms suggest that the emergence of these symptoms in soldiers was often attributed to organic causes: physical damage associated with the experience of

warfare. Sometimes, though, the soldier himself was blamed, as these symptoms were interpreted as signs of weakness, laziness, or feeble-mindedness. Psychiatric casualties, as they were sometimes called, were treated far forward, rather than evacuated to the rear, with the goal of rapidly returning them to duty. Psychologizing or medicalizing the soldier's symptoms was thought to prolong and intensify the episode and to impede eventual recovery. The term "battle fatigue" implied a reversible state brought on by prolonged stress, and treatment was organized along these lines.

Clinical psychology did not really become well-institutionalized until after World War II, and disciplinary boundaries were not as rigid then as they seem to be now. Gustave Gilbert, the psychologist who administered Rorschach tests to the war criminals at Nuremberg, for example, was trained in experimental psychology. Many initiatives that would now seem firmly related to clinical psychology were undertaken by a more varied group of professionals then. Psychiatrists, psychologists, and others, for example, were sometimes called upon to offer psychological assessments of foreign leaders or culture. At least two such efforts to analyze Adolf Hitler were commissioned, one of which led to the eventual publication of the somewhat sensational book *The Mind of Adolf Hitler*.

The *Office of War Information* orchestrated information campaigns within the United States and in the theaters of war. These efforts straddled the boundaries of what we might now think of as social psychology and clinical psychology. Films, posters, and other publications were created to buttress and sustain morale on the home front and among the fighting troops and to erode morale in enemy societies and formations. The dominance of Freudian thinking at the time ensured that these efforts were guided in part by psychoanalytic formulations.

Social psychologists were drawn into this effort to monitor opinions and attitudes, again both on the home front and overseas. Before and after the end of the war, psychologists interviewed German prisoners of war to assess morale and attitudes, helped guide the Military Government rebuilding of Germany, and studied the effects of the strategic bombing campaign on German citizens and society.

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## **Military Psychology Research**

The five areas discussed above constitute the core of military psychology. In many countries there is an elaborate infrastructure of military-oriented research establishments that address these specific areas. In the United States, many (though certainly not all) of the research institutions and laboratories that address military psychology-related issues are part of the military medical research establishment. This is especially true of the human performance, some human factors, and clinical domains. Others, such as selection and training, are more likely to be integrated into personnel-related institutions and laboratories. These are broad generalizations, and there are many exceptions. The specific circumstances and challenges faced by countries may help shape the contours of their research infrastructure.

## Military Psychology Today

The topic areas listed in the foregoing section can still be considered an accurate summary of the main areas of interest in military psychology. There has nevertheless been a great deal of change in military affairs since World War II. The rise of irregular warfare that occurred as the Cold War rendered general conflict unthinkable, followed by the emergence of terrorism or asymmetric warfare as a global threat have brought new problems and questions to the table. Racial and gender integration have altered military organizations, many of which are now smaller and are often all-volunteer forces. Family issues, the integration of LGBT service members, deployment and re-integration, suicide, PTSD, traumatic brain injury, remote warfare – these are challenges that confront contemporary military psychologists that were not on the radar at the turn of the twenty-first century, let alone the middle of the twentieth century.

Military psychologists continue to work in core issue areas, but now also address themselves to new problems. One way to track these evolutionary changes in military psychology is to examine the contents of handbooks of the discipline periodically produced by major academic publishers. Such handbooks generally include a guess at the future of military psychology but are especially useful as snapshots in time, opening a window onto the topics confronting military psychologists in the years immediately preceding the publication of the handbook.

The 1992 *Handbook of Military Psychology* edited by Reuven Gal and David Mangelsdorff offers a look at the field at the end of its first half-century, before the attacks of September 11, 2001, would set in motion a chain of events that would inevitably expand the scope of military psychology. The topics covered in this 1992 handbook exhibit considerable continuity with the topics that had their origins in World War II and before. The section headings in this volume were selection, classification and placement, human factors, environmental factors, individual and group behavior, clinical and organizational applications, and special issues. These section headings track well with the major areas of military psychologists at the end of World War II.

A pair of handbooks published two decades later illustrate the changes in military psychology occasioned by the evolving global war on terror. The *Oxford Handbook of Military Psychology* (Laurence and Matthews, 2012) and *Military Psychology: Clinical and Operational Applications* (Kennedy and Zillmer, 2012) included several topics which had not appeared in earlier handbooks. The *Oxford Handbook*, for example, included ethics in interrogation, terrorism, LGBT issues, and families, in addition to the more traditional topics addressed in military psychology. These additions reflect some changes in military establishments themselves, such as the opening of service to LGBT personnel that has now taken place in most Western militaries and growing recognition of the role of families in military life, as increasing professionalization and decreasing reliance on draftees or conscripts in many services has increased the proportion of service members with families.

These changes also reflect the changing character of military operations after September 11, 2001. Terrorism and terrorists naturally have become an object of

interest to military psychologists, and the involvement of psychologists in the interrogation process provoked a searching appraisal and evaluation of the role played by military and civilian psychologists in these interrogations. The Oxford volume included a chapter on suicide prevention. International concern with the problem of military suicide has led to increased efforts by military psychologists to better understand this tragic phenomenon (NATO, 2018).

Three more recent handbooks, the *Military Psychologists's Desk Reference* (Moore and Barnett, 2013), the *Handbook of Military Psychology: Clinical and Organizational Practice* (Bowles and Bartone, 2017), and the *Routledge International Handbook of Military Psychology and Mental Health* (Kumar, 2019) address suicide in the military, family issues, and issues related to the service of women in military organizations. The *Military Psychologist's Desk Reference* contains 67 chapters organized into four areas: history and culture, specialties and programs, ethical and professional issues, and clinical research and practice. The 2017 handbook by Bowles and Bartone also addresses the issue of sexual assault in military forces, a problem that has attracted more attention from military psychologists. This book also contains a very useful series of summaries of developments in military psychology from several different nations.

## The Future of Military Psychology

Because military psychology is an applied discipline, military psychology is what military psychologists do. Some of the things that military psychologists do today are things that they have been doing from the very beginning of the discipline. Selection, classification, and training, and human factors and human engineering continue to be important parts of military psychology because the problems they address are essential: Militaries will always need to bring personnel into their organizations, will always need to classify, assign, train, evaluate, and promote them, and will always need new technology. The problems confronting military personnel psychologists may change, both because of changing military needs and because of the dynamic nature of the societies from which those militaries are drawn, but the general issues remain the same.

Human factors, human engineering, environmental factors, and human performance are likewise areas that have exhibited considerable stability as components of military psychology. Technology continues to evolve, and the military continues to be a major contributor to technical change and a major consumer of new technology. Technology changes, but new technology must still be effectively integrated into military services.

Other things military psychologists do are responsive to changes in military affairs – for example, suicide, sexual assault, LGBT issues, families, torture, and terror. Sometimes entirely new issues arise to confront military psychologists. The introduction of unmanned aerial vehicles, or remotely-piloted aircraft, for example, brought both traditional issues, such as human factors, to military psychologists, but also new problems associated with service members sometimes performing wartime functions in peacetime environments. What new issues and problems will challenge



military psychologists in the future cannot be known, but we can expect that military psychologists will apply the time-tested methods and approaches to address those issues and problems.

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## Summary

While military psychology only became formally institutionalized in the early twentieth century, we can trace interest in many of the core issues in the discipline back to antiquity. Changes in the nature of warfare and technological developments have altered and expanded the topics addressed by military psychologists. Military psychology began a dramatic expansion and institutionalization during and after the First World War. As an applied discipline, military psychology is what military psychologists do, and what military psychologists do is dictated by the constantly changing demands placed on military organizations and individuals as warfare and technology continue to evolve.

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## Cross-References

- ▶ [Anthropological Study of the Military](#)
- ▶ [Application of Military History](#)
- ▶ [Artificial Intelligence](#)
- ▶ [Conflict Management](#)
- ▶ [Counterinsurgency Operations](#)
- ▶ [Decision Making](#)
- ▶ [Human Interaction with/through Technology](#)
- ▶ [Humanities' Influence on Military Sciences](#)
- ▶ [Information Systems](#)
- ▶ [Leadership in Extremis](#)
- ▶ [Military and Popular Culture](#)
- ▶ [Military Behaviour and Ethics](#)
- ▶ [Military Families: Challenges and Opportunities in Turbulent Times](#)
- ▶ [Military Leader and Leadership Development](#)
- ▶ [Military Personnel](#)
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- ▶ [Military Training, Education, and Socialization](#)
- ▶ [Military Women: Changes in Representation and Experiences](#)
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- ▶ [Social Sciences' Influence on Military Sciences](#)
- ▶ [Weaponry](#)
- ▶ [What is Military Leadership?](#)
- ▶ [What is Military Technology?](#)

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# Empirical Research on Military Ethical Behaviour

Deanna L. Messervey and Erinn C. Squires

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## Abstract

This chapter presents an overview of key empirical research examining ethical and unethical behaviour in the military. Early research examined the impact of atrocities on the psychological well-being of Vietnam War veterans. In later conflicts, researchers examined battlefield attitudes, behaviours, willingness to report fellow unit members for ethical violations, and the adequacy of training. In addition to battlefield ethics, researchers have also investigated individual, situational, and organizational factors that increase the risk of unethical behaviour (i.e., ethical risk factors). This chapter summarizes research that highlights how individual differences in moral identity and malevolent traits can impact ethical and unethical behaviour among military personnel. It also discusses how situational factors, such as sleep deprivation and anger, can increase the likelihood of military personnel engaging in unethical behaviour. Lastly, the chapter discusses

D. L. Messervey (✉) · E. C. Squires  
Department of National Defence, Ottawa, ON, Canada  
e-mail: [Deanna.Messervey@forces.gc.ca](mailto:Deanna.Messervey@forces.gc.ca); [Erinn.Squires@forces.gc.ca](mailto:Erinn.Squires@forces.gc.ca)

how organizational factors, such as ethical climate and culture and ethical leadership, play a role in ethical and unethical behaviour.

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**Keywords**

Atrocity · Abusive violence · Ethical behaviour · Unethical behaviour · Ethical risk

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**Introduction**

Torture, mutilation, rape, and genocide have long been part of armed conflict (Fiske and Rai 2015). Yet warfare has also had guiding principles and customs that would eventually become the Law of Armed Conflict (LOAC) and the Geneva Conventions (International Committee of the Red Cross 2004). Ethical behaviour in general is important for military personnel because of the physical and psychological consequences for the victims, the witnesses, the perpetrators, and for the success of the mission (Blanc et al. 2018). It is therefore important to understand the causes of unethical behaviour among military personnel. This chapter describes the research on ethical behaviour in the military. Drawing heavily on research that measures behavioural outcomes, this chapter begins by discussing research related to battle-field ethical behaviour from the Vietnam War to the present. Next, it presents an overview of individual, situational, and organizational ethical risk factors relevant to the military that have been found to predict ethical behaviour. Although military ethics crosses many disciplines, including philosophy, theology, sociology, and law, this chapter focuses on evidence-based psychological studies of military ethical behaviour and does not address what military personnel ought to do.

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**Key Definitions**

Many militaries have regulations and directives that set high standards of professional conduct for military personnel backed by serious penalties for not living up to them. Canadian military personnel have a legal obligation to report their peers for unethical behaviour (*Queen's Regulations and Orders*), for example, and adultery is considered illegal under the *American Uniform Code of Military Justice*. Moreover, military personnel are bound by the LOAC, which is a set of internationally agreed upon rules that outline who is protected from armed conflict (e.g., wounded soldiers, prisoners of war, civilians) and what forms of warfare are prohibited (e.g., poison; International Committee of the Red Cross 2004). Many of the principles in the LOAC have been ratified by the 1949 Geneva Conventions by Member States of the United Nations, and serious breaches of the Geneva Conventions are considered war crimes (United Nations Office on Genocide Prevention and the Responsibility to Protect, n.d.).

Although there is no single agreed upon definition of unethical behaviour, this chapter follows Blanc et al. (2018) in defining unethical behaviour as actions inconsistent with the LOAC or military values. Ethical risk is defined as the probability of military personnel acting in ways that are inconsistent with military values, and ethical risk factors are defined as situational, organizational, and individual factors that can influence the likelihood of unethical behaviour (Messervy and Lavergne 2016). Ethical behaviour is understood to span a spectrum from minor transgressions like taking extended breaks to atrocity – “excessive violence and cruelty that does not provide a tactical advantage in war” (Blanc et al. 2018, p. 250). The term abusive violence is often used interchangeably with the term atrocity, and it is defined as inhumane treatment of civilians and prisoners of war and the use of cruel weaponry (Laufer et al. 1984). This definition does not address ethical dilemmas military personnel may face, such as behaviour by personnel in allied nations that violates Western norms.

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## Battlefield Ethics

Although researchers were studying the psychological effects of war during World Wars I and II, they only began scientifically examining the psychological effects of witnessing or participating in atrocities or abusive violence during the Vietnam War (Laufer et al. 1984; Wilson and Krauss 1983). Understanding the link between mental health and battlefield ethics surged with more recent wars in Iraq and Afghanistan. In this section, empirical research on military ethical behaviour is summarized, specifically in relation to battlefield ethics since the Vietnam War.

### Vietnam

On March 16, 1968, a Vietnamese hamlet called My Lai was the scene of one of the worst atrocities carried out by American military personnel against civilians. Believing that they were in a search and destroy mission for Viet Cong enemy fighters, soldiers found and shot civilians ranging from infants to the elderly. Many Vietnamese lives were saved when a US helicopter pilot named Hugh Thompson Jr. positioned himself between his fellow US military personnel and the Vietnamese civilians and ordered them to stop killing civilians.

Although the My Lai massacre was the most infamous case of unethical behaviour that took place in Vietnam, it was not the only one. Many believe that the Vietnam War was a “relatively unique war in that its distinctive environmental conditions provided many situational inducements to behave in inhumane ways” (Kraus 2013, p. 3). One of the metrics of military success used in the Vietnam War, for example, was body count (i.e., the number of dead) and those killed by American military personnel were often categorized as a Viet Cong (Kelman and Hamilton 1989).

In the 1980s, researchers began looking at the link between atrocity and psychological well-being (Laufer et al. 1984; Laufer et al. 1985; Kulka et al. 1988; Wilson and Krauss 1980). In one of the earliest quantitative studies of the link between types of war zone experiences and their psychological consequences, Laufer et al. (1984, 1985) found that traditional combat experiences (e.g., threats to one's personal safety, seeing dead bodies) yielded different psychological outcomes than witnessing and participating in abusive violence, a finding that was supported by later research (King et al. 1995). Laufer used the term abusive violence to refer to excessively violent and brutal conduct during war that included the torture, rape, and killing of civilians, the torture of prisoners of wars, and the mutilation of dead enemy combatants' bodies.

Other early abusive violence (atrocities) research was based on the atrocity exposure subscale of the Vietnam Era Inventory developed by Wilson and Krauss (1983). Although other researchers went on to develop atrocity measures (Breslau and Davis 1987; MacNair 2002), the measures developed by Laufer and colleagues and Wilson and Krauss had the most impact on later atrocity research that focused on American Vietnam veterans. For example, the National Vietnam Veterans Readjustment Study (NVVRS) – a comprehensive US Congress-mandated study that sought to understand the prevalence of PTSD among Vietnam veterans – was built on the work of Laufer and colleagues (Kulka et al. 1988). The NVVRS database influenced later battlefield ethics research (Currier et al. 2014; Fontana and Rosenheck 1993; MacNair 2002). Similarly, a recent study by Dennis et al. (2017) on the link between atrocity and PTSD administered the atrocity subscale developed by Wilson and Krauss (1983).

Four key findings emerged from the Vietnam battlefield ethics research. First, combat exposure predicts abusive violence, such that higher levels of combat exposure are related to greater abusive violence (Blanc et al. 2018; Hiley-Young et al. 1995; Warner et al. 2011; Wilk et al. 2013). Second, many Vietnam veterans were exposed to atrocities, either in the form of witnessing or participating in atrocities and abusive violence. Third, exposure to atrocity increased the risk of psychological disorders, particularly PTSD (Beckham et al. 1998; Breslau and Davis 1987; Dennis et al. 2017; Hiley-Young et al. 1995; Holowka et al. 2012; King et al. 1995). In one early study, researchers found that Vietnam veterans who had PTSD were more likely than Vietnam veterans who did not have PTSD to have witnessed or participated in abusive violence (Shaw et al. 1987). More recently, Dennis et al. (2017) found that exposure to atrocities was associated with PTSD and depression and that atrocity exposure almost completely accounted for the relationship between combat exposure and PTSD. In addition, they found that exposure to atrocity predicted guilt, hostility, depression, and thoughts of suicide. Fourth, participation in atrocity appears to yield more negative psychological outcomes than witnessing atrocity (Breslau and Davis 1987; Hiley-Young et al. 1995; MacNair 2002). Among veterans seeking treatment at a Veterans Affairs center, participation in atrocities significantly increased the risk of PTSD, whereas those who only witnessed atrocities had the same risk of PTSD as those who had not participated in or witnessed atrocities (Breslau and Davis 1987).

## **Afghanistan and Iraq**

While there have been incidents of unethical behaviour in the militaries of various countries, including allegations of sexual misconduct among senior military leaders in the Canadian Armed Forces and unlawful killings by members of the Australia Defence Forces, Royal Marines, and the US Marine Corps, much of the available research has been conducted in the United States, especially after the Mental Health Advisory Team (MHAT)-IV was established in response to events within the US military (e.g., at Abu Ghraib). This next wave of battlefield ethics research drew heavily on military personnel who served in the US Operation Enduring Freedom (OEF) in Afghanistan and Operation Iraqi Freedom (OIF) in Iraq. Multiple high-profile incidents of unethical behaviour that violated the LOAC were reported during these operations, including the videotaped killing of a wounded Iraqi insurgent in a mosque by an American marine, the abuse of detainees at Abu Ghraib prison by American reservists, and the alleged unlawful killings of civilians by Australian Special Operations and American military personnel.

### **The Mental Health Advisory Team (MHAT)**

The US Army chartered a Mental Health Advisory Team (MHAT) in July 2003 to assess the mental health and well-being of soldiers (MHAT I). MHAT's assessment tool became known as the MHAT survey (or the MHAT), which was administered annually to in-theater army personnel and, in 2006, to US Marines as well. The MHAT IV (2006) was expanded to include questions related to battlefield ethics, such as attitudes, behaviours, willingness to report, and training. Key findings from this research revealed a strong connection between unethical behaviour and attitudes among personnel and their mental health. Personnel screened as having mental health issues (e.g., anxiety, depression) were twice as likely as those who did not to report engaging in unethical behaviour. Moreover, personnel who had high levels of anger were more likely than those with low levels of anger to engage in unethical behaviour. Combat experience – measured by having a member of one's unit being a casualty of war and handling dead bodies and human remains – was also related to unethical behaviour. For example, marines who had handled dead bodies were more likely than those who had not to insult or curse at noncombatants, unnecessarily damage private property, and hit or kick a noncombatant.

The MHAT IV was one of the first investigations to report on the ethical attitudes and behaviours of military personnel toward insurgents and noncombatants, and it revealed that many marines and soldiers had attitudes inconsistent with the US military's expectations and standards. In particular, roughly 40% of soldiers and marines agreed that torture should be allowed in order to save the life of another soldier, and less than half believed that noncombatants should be treated with dignity and respect. Almost a third of respondents reported that they had cursed at or insulted noncombatants and roughly 10% reported mistreating noncombatants by damaging property or hitting and kicking them. Moreover, less than half of respondents were willing to report a team member for various ethical violations.



In 2007, the same four dimensions of battlefield ethics (i.e., attitudes, behaviours, willingness to report, and training) were readministered in the MHAT V (2008). Overall, the pattern of findings in MHAT V was the same as those in MHAT IV, with one exception. Soldiers were less likely to report that they had modified the rules of engagement in the MHAT V. The MHAT V also found that deployment length was related to unethical behaviour: Unethical behaviour increased linearly over the first 10 months of the deployment, and then decreased. Building on the results of the MHAT V that showed aggression, combat experience, and PTSD were related to unethical conduct, Wilk et al. (2013) examined the relationship between these variables further. They found that PTSD was not the most important factor in predicting unethical conduct. Rather, unethical conduct was more associated with witnessing atrocities than with PTSD, killing others, and exposure to the death and injury of others.

A key recommendation of the MHAT IV was to implement a battlefield ethics training program. In response, a scenario-based in-theater ethics training program was developed for American soldiers and subsequently assessed. Warner et al. (2011) used the MHAT V battlefield ethics survey results as a baseline and administered these items following the training. They found that attitudes toward the treatment of noncombatants and willingness to report fellow unit members for ethical violations were more aligned with Army standards and the LOAC. Most importantly, Warner et al. (2011) found a decrease in some reported unethical behaviour during deployment.

Much of the research discussed so far has focused on the United States because ethical behaviour research originated out of American involvement in the Vietnam War and again later in MHAT's battlefield ethics research, which focused on US military personnel. Other militaries have since examined battlefield ethics in relation to ethical attitudes and intentions. The Canadian Armed Forces examined the impact of rank on ethical attitudes and intentions and found that ethical attitudes increased as rank group increased (Therrien and Messervey 2019). This pattern of findings is consistent with Dutch qualitative and quantitative research that found that leaders at the officer and noncommissioned member level were more likely than their followers to have more developed moral identities, making them more inclined to discuss moral values and principles when describing morally challenging situations on deployment (De Graaff et al. 2020). In addition, the MHAT battlefield ethical attitudes and behaviour measures were recently administered to Swedish peacekeepers deployed to Mali. The results revealed that no peacekeepers had unnecessarily kicked or hit noncombatants and almost nobody had unnecessarily damaged private property (Lindén et al. 2019). The Dutch Ministry of Defence has also examined the role of moral emotions in morally challenging situations on military operations (De Graaff et al. 2015; Schut et al. 2015). Based on anthropological and psychological research methods, they found that deployment can present morally challenging situations that invoke strong emotions and behavioural response strategies, such as when Dutch values clash with local customs and traditions.

Ethical breaches on the battlefield have also informed research by militaries and academics exploring potential ethical risk factors for unethical behaviour. For

example, moral courage (having the strength of character to act ethically), moral efficacy (a person's confidence in their ability to behave ethically when faced with a moral challenge), and moral ownership (feeling responsible to act) have each been found to be negatively associated with soldiers' tolerance for torture and for mistreating combatants and noncombatants, and positively related to adherence to Army values and intentions to report others for unethical behaviour (Schaubroeck et al. 2010, as cited by Hannah and Avolio 2010). The following section delves deeper into individual, situational, and organizational risk factors for ethical and unethical behaviour beyond the battlefield.

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## Ethical Risk Factors

The key studies described above examine the link between battlefield ethics and behaviour among serving military personnel or veterans. In tandem with the battlefield ethics research, academic and applied researchers have examined various factors that increase or decrease the likelihood of unethical behaviour (i.e., ethical risk factors). Building on Bradley and Tymchuk's work on ethical risk (2013, 2016), this section examines three levels of ethical risk: individual, situational, or organizational.

### Individual

Ethics research on individual differences is generally grouped into two categories. The first looks at individual differences that increase ethical behaviour, such as moral identity. The second looks at individual differences that increase unethical behaviour, such as malevolent traits. Other individual risk factors include moral efficacy (Hannah et al. 2011), self-control (Baumeister and Alghamdi 2015), and how well one's values fit with those of the organization (Vila-Vázquez et al. 2021).

### Moral Identity and Ethical Behaviour

Moral identity – the extent to which having moral traits, goals, and values are central to one's self-concept – is an individual difference that predicts ethical behaviour (Aquino and Reed 2002). People higher in moral identity are more likely than those who have a lower moral identity to volunteer, avoid acting aggressively, and to engage in behaviours that exceed their required job duties (Hertz and Krettenauer 2016). The Moral Identity Scale developed by Aquino and Reed (2002) is the most frequently used measure moral identity (Hertz and Krettenauer 2016; Jennings et al. 2015). A key finding in the moral identity research is that people's moral identities need to be activated to guide behaviour. For example, recalling the Ten Commandments activates people's moral identity, which in turn increases ethical behaviour. As such, having a strong moral identity does not necessarily mean that people will act ethically in every situation (Aquino et al. 2009).

Military research on moral identity has focused on the link between leadership and moral identity. In a Norwegian naval cadet sample, moral identity was positively related to peer ratings of transformational leadership and negatively related to peer ratings of passive-avoidant leadership. Transformational leaders inspire their followers to put the common cause or vision ahead of their own interests, whereas passive-avoidant leaders refrain from making active decisions and rectify errors only after they have occurred (Olsen et al. 2006). Other military research has examined the link between moral identity, ethical leadership, and ethical behaviour. Canadian defense personnel who had stronger moral identities and who saw their leaders as being more ethical reported lower levels of unethical behaviour (O’Keefe et al. 2019b).

Military researchers based in the Netherlands have examined the relationship between moral identity, leadership, and moral disengagement (de Graaff et al. 2020). Moral disengagement refers to psychological maneuvers people use to disengage their moral standards so they do not feel guilty when they act in ways inconsistent with these standards (Bandura 1999). Dutch military personnel who served in Afghanistan were interviewed regarding their operational experiences. Researchers then coded the number of times they discussed themes related to moral identity, moral disengagement, and moral dilemmas. Greater awareness of moral issues was related to more justifications for one’s actions. This finding is notable because justifications are a form of moral disengagement. Interestingly, military leaders who served in Afghanistan tended to discuss moral identity more frequently than subordinates (de Graaff et al. 2020).

### **Malevolent Traits and Ethical Behaviour**

Malevolent traits compose the *dark triad* personality traits and sociopolitical attitudes (Lindén et al. 2019). The dark triad was coined by Paulhus and Williams (2002) to refer to Machiavellianism, narcissism, and psychopathy. A Machiavellian personality is characterized by the manipulation of others and a belief that the ends justify the means; a narcissistic personality is overly motivated by self-concern and grandiosity; and a psychopathic personality refers to having a tendency to violate the rights of others and as lacking guilt and empathy. In addition to the three dark traits described above, researchers have examined two main sociopolitical attitudes: right-wing authoritarianism (RWA) and social dominance orientation (SDO). RWA refers to a personality that tends to submit to authority, that values tradition, and that is willing to support aggression toward people who do not follow expectations and norms (Altemeyer 1981; Whitley 1999). Social dominance orientation refers to “one’s degree of preference for inequality among social groups” (Pratto et al. 1994, p. 741). Both RWA and SDO predict prejudice toward outgroup members, such as homosexuals (Whitley 1999).

Researchers have found that within the five dark traits (i.e., Machiavellianism, narcissism, psychopathy, social dominance orientation, and right-wing authoritarianism) an underlying core predicted warzone ethical attitudes, organizational ethical behaviour, and self-reported ethical behaviour in a warzone (Lindén et al. 2019). This finding is noteworthy because it suggests that it might be more effective for

organizations to use this core of darkness than using measures of Machiavellianism, narcissism, psychopathy, social dominance orientation, and right-wing authoritarianism when screening at-risk candidates. Some research (Nicol et al. 2007) suggests that military socialization may increase SDO but not RWA. Officer cadets enrolled in a Canadian military college reported higher levels of SDO over time. Interestingly, people who applied to be in the military had lower levels of SDO than civilians who did not apply to join the military. Taken together, these findings suggest that increases in SDO among military cadets are attributed to socialization rather than individuals high in SDO selecting to enroll in the military.

## Situational

Despite the importance of individual factors, people can be placed in situations where extraneous factors override their preferences. The context in which a decision must be made influences the ethical decision-making process. Many situational factors can affect ethical decision-making (Messersvey et al., 2021; Messersvey and Peach 2014; and for a review see Bradley and Tymchuk 2013, 2016; and Messersvey 2013). In this chapter two key examples of situational risk factors are discussed: anger and sleep deprivation. Other examples include combat (Wilk et al. 2013) and other stressful conditions (Shalvi et al. 2012), anonymity (Watson 1973), and a desire to minimize risk of harm to military personnel on operations (Choi and Bowles 2007).

Combat experience is an ethical risk factor specific to military operations. Combat experience can include fighting, killing others, witnessing atrocities, threats to one's safety, and exposure to the dead and injured (Wilk et al. 2013). The frequency of various types of combat experience can vary by deployment and operation. American soldiers deployed to Iraq in 2007 most frequently reported the combat experiences of knowing someone who was killed or injured, seeing dead bodies, and working in mined areas. Among a Canadian Armed Forces sample, personnel who recently served in Afghanistan most frequently experienced hostility from the local population (Sudom et al. 2016). Combat experiences, like the ones experienced by US and Canadian military personnel, can lead to feelings of anger (Reyes and Hicklin 2005), and combat experiences and anger are related to ethical behaviour (MHAT IV 2006; Wilk et al. 2013). Researchers found that anger along with disgust were the most common emotions Dutch military personnel cited when describing morally challenging situations on deployment (de Graaff et al. 2015). As mentioned above, moreover, US soldiers who felt angry were more likely than those who did not to report engaging in unethical behaviour, such as kicking and hitting non-combatants and damaging property when it was not necessary (MHAT IV 2006).

## Sleep Deprivation

Fatigue and sleep deprivation negatively affect most types of decision-making, from maintaining vigilance to working-memory tasks that require manipulating information using short-term memory (Lim and Dinges 2010). Sleep deprivation not only

impairs decision-making in general but can also affect ethical decision-making. In one study, sleep-deprived military students who were taking part in a training exercise were instructed to fire upon realistic-looking dummies. When the target of the exercise turned out to be real people, 59% of the students tried to fire their weapons in response to an order, even though it violated the LOAC (Larsen 2001).

Fatigue can affect all four components of the ethical decision-making process: (1) moral awareness, (2) moral judgment, (3) intentions to act morally, and (4) moral action (see Rest 1986, for more information on the four components of ethical decision-making). When people are tired, they are less likely to be aware of moral issues. The day following daylight savings time, people are less likely to search moral topics (as measured by Google searches) and to notice moral content in hypothetical moral scenarios (Barnes et al. 2015). Likewise, people are more likely to make poorer moral judgments when they are tired, such as emotionally charged moral judgments (Killgore et al. 2007). Mental fatigue has been found to be related to lowered ethical intentions. A study showed that people experiencing higher levels of sexual desires had greater intentions to engage in infidelity when they were mentally fatigued than those who were not mentally fatigued in a hypothetical scenario (McIntyre et al. 2015). Moreover, when people are tired, they may be tempted to cheat (Barnes et al. 2011) and voluntarily engage in behaviours that violate organizational expectations and threaten the health of an organization (Christian and Ellis 2011).

Good leadership is related to ethical conduct (Kaptein 2008; O’Keefe et al. 2018); however, sleep deprivation can also negatively impact leaders. A Norwegian study found that sleep-deprived military officers were less likely to demonstrate transformative leadership and more likely to show signs of passive-avoidant leadership (Olsen et al. 2016). Naval officer cadets were also less able to anticipate moral problems in a simulated naval operation when they were sleep-deprived (Olsen et al. 2013). Other researchers have found that sleep deprivation in leaders leads to lower perceptions of charisma among followers (Barnes et al. 2016).

## Organizational

Like situational factors, organizational ethical risk factors are external influences that can shape a person’s behaviour and ethical decision-making; however, organizational factors are directly related to the organization in which a person is employed. A considerable amount of research has examined the impact of the ethical climate and culture of an organization as well as the influence of ethical leadership on ethical behaviour. Other examples of organizational ethical risk factors include ethos (Fotaki et al. 2020), role expectations (Kelman and Hamilton 1989), and norms (Gino et al. 2009).

## Ethical Climate and Culture

Ethical climate refers to “the shared perception of what is correct behavior, and how ethical situations should be handled in an organization” (Victor and Cullen 1987,

p. 51). Much of the research related to ethical work climate began with Victor and Cullen. They proposed different climate types that describe the atmosphere within an organization that people consider when dealing with an ethical issue. Five climate types have emerged from their work: (1) instrumental/self-interested – i.e., decisions are made with a focus on the interests of the organization or the individual person; (2) caring – i.e., consideration is centered on a concern for others; (3) rules – i.e., decisions follow the organization's rules; (4) independence – i.e., decisions are based on the person's own ethics and principles; and, (5) law and code – i.e., decisions follow the laws of society.

A significant amount of research (for reviews see Kish-Gephart et al. 2010 and Martin and Cullen 2006) has focused on the outcomes of ethical climate in organizations, and more specifically on the relationship with ethical and unethical behaviour. The ethical climate of organizations has been shown to influence ethical decision-making (Verbeke et al. 1996), ethical behaviour (Shacklock et al. 2013), engagement in counterproductive workplace behaviours (e.g., stealing; Weber et al. 2003), and unethical behaviour (Peterson 2002). Research by Shacklock et al. (2013) found that the perception of the ethical climate in an organization was related to resistance toward a hypothetical unethical situation. Specifically, participants who had a positive perception of their ethical work climate had a heightened sense of self-efficacy; thus, when presented with unethical decisions, they were more able to resist. It has also been found that the effect of ethical climate on ethical behaviour can be bolstered at the work unit level (Arnaud and Schminke 2012). Ethical climate affects ethical behaviour when the work unit has a strong shared belief in their ability to behave ethically (i.e., collective ethical efficacy).

A study with Canadian Army personnel (O'Keefe 2006) examined the relationships between ethical climate, SDO, RWA, and unethical behaviour. This research found that a rules-based ethical climate moderated the relationship between SDO and unethical behaviour. When the climate was perceived to be a strong rules-based climate, Army personnel with a low SDO reported less past unethical behaviour and lower likelihood of engaging in future unethical behaviour. While much of the remaining research on the influence of ethical climate on ethical and unethical behaviour has been conducted with nonmilitary samples, it is evident that ethical climate is an important component of military organizations. Using a military and civilian sample from the Canadian Armed Forces and the Department of National Defence, Dursun (2004) identified important gaps between participants' perceptions of ethical climate between "the way things are" in the organization and individual values regarding "the way things ought to be." As well, Weber and Gerde (2011) have looked at the influence of various organizational factors on the ethical climate of military organizations. Their research suggests that instrumental and caring climates were more prevalent in units with higher risk levels (i.e., in terms of consequences of mission failure), environmental uncertainty, and more task interdependence. While not directly related to ethical behaviour, these results have implications for communications from leadership and also for ethics training (Weber and Gerde 2011). Knowing the ethical climate of a unit should help target the

messaging and content of communications and training with respect to ethical and unethical behaviour.

Ethical culture refers to “a subset of organizational culture, representing a multi-dimensional interplay among various formal and informal systems of behavioral control that are capable of promoting either ethical or unethical behavior” (Trevino et al. 1998, p. 451). Whereas ethical climate focuses on the perceptions of those within the organization about handling an ethical dilemma, ethical culture is related to the conditions that exist within the organization that promote ethical behaviour. In line with this, Kaptein (2007) developed the Corporate Ethical Virtue model and defined corporate ethical virtues as “the organizational conditions for ethical conduct” that “reflect the capacity of an organization to stimulate ethical conduct of employees” (p. 924). According to this model, an organization can target solutions for specific weaknesses by understanding the conditions that influence ethical behaviour and identifying potential weak spots in these conditions (Kaptein 2011a).

Like ethical climate, the outcomes of ethical culture in organizations have been well researched. Ethical culture is related to employee responses to observed wrongdoings (e.g., inaction, confrontation, whistleblowing; Kaptein 2011b), unethical behaviour (Kaptein 2011a), and ethical strain (i.e., the stress resulting from dealing with ethical dilemmas; Huhtala et al. 2011). Kaptein (2011a) found that the majority of the dimensions of ethical culture mentioned above were negatively related to unethical behaviour across multiple organizations. Moreover, when observing wrongdoings, the dimensions of ethical culture have been shown to be positively related to intentions to intervene, whether directly to a superior or indirectly via an ethics hotline (Kaptein 2011b).

Research has also shown that ethical culture is strongly connected to ethical leadership (Schaubroeck et al. 2012). Using a sample of US soldiers, Schaubroeck and colleagues found that ethical leadership and ethical culture were positively related at each level of the organization. Moreover, higher level ethical leadership trickled down to positively impact both lower level ethical leadership and also ethical culture. This trickle down of ethical leadership to ethical culture had a positive influence on followers’ beliefs in their own ability to act ethically (i.e., moral efficacy) and ethical behaviour, as well as a decrease in unethical behaviour. Ethical leadership is believed to be one of the most influential factors on ethical culture in organizations (Neubert et al. 2009; Schminke et al. 2005) and a strong predictor of the ethical behaviour of people within the organization.

## **Ethical Leadership**

Leadership plays an important role in promoting ethical behaviour and responding to ethical risk situations (Bradley and Tymchuk 2013, 2016; Olsen et al. 2010). Ethical leadership is defined as “the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making” (Brown et al. 2005, p. 120). Using a social learning perspective, Brown and colleagues argue that ethical conduct and behaviour is transferred from leaders to followers via role modeling, and research within a military context has shown that ethical leadership at one level often trickles down to influence ethical



culture and ethical leadership at more junior levels of the organization (O’Keefe et al. 2019a; Schaubroeck et al. 2012). Moreover, Mayer et al. (2009, 2010) have shown that ethical leadership at higher levels is negatively associated with employee misconduct and deviance, such as taking property from work, damaging property, and deliberately breaking rules.

A significant amount of research has examined the various outcomes of ethical leadership, including willingness to engage in internal whistleblowing (Mayer et al. 2013), employee misconduct (Mayer et al. 2010), workplace deviance (Mayer et al. 2009), and unethical behaviour intentions (O’Keefe et al. 2018). Research with Canadian defense personnel (O’Keefe et al. 2018) found that those who report that their leaders and coworkers act ethically were more likely to engage in behaviours that went above and beyond their regular duties (i.e., organizational citizenship behaviours) and also reported higher levels of ethical intentions (i.e., the likelihood of engaging in ethical behaviour). On the other hand, experiencing bad leadership has been linked to unethical behaviour in military personnel. In a study examining the relationship between leadership and ethical outcomes among US soldiers serving in Iraq, Hannah et al. (2013) found that abusive leadership decreased soldier’s moral courage and identification with the organizations’ values, which in turn was related to an increase in mistreating noncombatants and a decrease in intentions to report others’ unethical behaviour.

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## Summary

Understanding military ethical behaviour has been a growing field since the Vietnam War. Research has focused on two main areas: (1) battlefield ethics and (2) ethical risk factors. Battlefield ethics encompasses battlefield ethical attitudes, intentions to act ethically, willingness to report peers who violate military laws and standards, and behaviour on operations. Ethical risk factors include individual, situational, and organizational differences that can increase the likelihood of military personnel engaging in unethical behaviour. Individual differences include having a strong moral identity and having malevolent traits, such as psychopathy, narcissism, and right-wing authoritarian tendencies. Situational risk factors include sleep deprivation and combat experiences that can lead to feelings of anger. Organizational factors include having strong ethical leadership and a strong ethical climate and culture.

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## Cross-References

- ▶ [Leadership in Extremis](#)
- ▶ [Military Leader and Leadership Development](#)
- ▶ [Military Profession](#)
- ▶ [Military Training, Education, and Socialization](#)
- ▶ [What is Military Leadership?](#)



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# Training-Related Stress and Performance in the Military

Oshin Vartanian, Cathy Boscarino, Jerzy Jarmasz, and Vlad Zotov

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## Abstract

Considerable research has focused on the effects of stress on the performance of military personnel on the battlefield. Less studied are the effects of stress on the performance of military personnel in the course of routine activities such as training. This chapter takes stock of stressors that impact learning and performance on a wide host of training-related activities, including simulated stress. This literature suggests a nuanced relationship between stress and performance in training, and highlights the moderating and mediating effects that social, contextual, and individual-differences factors exert on that relationship. Importantly,

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O. Vartanian (✉)

Defence Research and Development Canada, Toronto Research Centre, Toronto, ON, Canada

University of Toronto, Toronto, ON, Canada

e-mail: [oshin.vartanian@drdc-rddc.gc.ca](mailto:oshin.vartanian@drdc-rddc.gc.ca)

C. Boscarino · J. Jarmasz · V. Zotov

Defence Research and Development Canada, Toronto Research Centre, Toronto, ON, Canada



although training scenarios aim to mimic realistic levels of stress to develop resilience, it is critical that stress induced in the training environment does not surpass the regulatory abilities of the trainees to cause impairments in learning. Toward that end, we discuss regulatory mechanisms that can be engaged to manage the effect of stress on training-related performance, as well as novel findings from systems neuroscience on how the brain responds to the presence of acute stress.

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**Keywords**

Stress · Learning · Training · Captivity survival · Performance · Tactical breathing · Threat awareness · Tactical combat casualty care · Stress inoculation training

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**Introduction**

A lot of research has focused on the impact of different stressors on performance of military personnel on the battlefield, such as sleep deprivation, fatigue, injury, sustainment of attention, and multitasking. Less appreciated is that many of the same stressors affect performance and learning during routine activities (e.g., training). By design, after all, military training addresses “all aspects of performance under highly stressful and adverse conditions. . .and. . .Preparations in this area are key to developing mental toughness and resiliency” (Department of National Defence 2014). In the present chapter, therefore, the impact of a wide host of stressors on learning and performance in training is reviewed, evaluating their effects on outcomes relevant to the military.

Before beginning, however, it is important to situate training-related stress and performance within the larger body of work in military behavioral sciences. In her overview of this large, interdisciplinary domain, Goldenberg (2021) noted that much of the work in military behavioral sciences falls within the discipline of social sciences, although the research also extends into allied disciplines such as physiology, human performance, human factors, and operations research (see Straver 2021). Within this larger sphere, research into training-related stress and performance can be seen as falling largely within the disciplines of psychology and physiology, as researchers aim to understand the impact of a wide host of stressors – both actual and simulated – on psychological and physiological functioning. For this reason, most researchers focusing on training-related stress and performance subscribe to biopsychosocial models of stress, in an effort to quantify the effects of stress on outcome measures that signal biological as well as psychological functioning, including social aspects thereof.

Methodologically, the bulk of the work involves the manipulation of stress in the context of training, and measuring its effects on a wide host of performance-related measures in human psychology and physiology. The manipulation of stress can take many forms, ranging from variation in relatively acute forms of stress such as



short-term sleep deprivation (i.e., sleep deprivation under 48 h) to more chronic forms of stress such as captivity survival training that can last several weeks, among others. For this reason, in terms of stress manipulation, the study of training-related stress overlaps with research on human performance, given that the latter focuses on the impact of environmental and physical stressors on human behavior and performance, including altitude, isolation, heat, cold, humidity, and aridity (see Sullivan-Kwantes et al. 2021). Indeed, research on human performance is relevant because it encompasses factors that are frequently manipulated experimentally to induce the desired levels of stress in training. In turn, the measurement of the effects of training-related stress on performance can also take many forms, ranging from assessing changes in basic biological functioning such as endocrinology (i.e., study of hormones) to higher-level psychological constructs such as interpersonal behavior in groups. This work is motivated by a basic tenet that optimal military performance includes personal as well as interpersonal aspects, and that understanding how training-related stress impacts performance in terms of both aspects is necessary for the development of countermeasures against its deleterious effects, including resilience.

## **The Stress-Performance Relationship: Uniformity and Diversity**

This chapter uses a stimulus definition of stress, according to which a stressor is any physical (including physiological) or psychological condition that necessitates an adaptive response from the organism (Byron et al. 2010). Physical stressors include factors such as altitude, noise, and temperature; psychological stressors include factors such as isolation, competition, and evaluation. Typically, the relationship between stress and performance is based on the stimulus definition where the former necessarily hampers the latter. However, there are theoretical and empirical reasons to believe that the stress-performance relationship can take many forms (see Farrell and Jarmasz 2020). First, the distraction arousal theory proposes that stress has a detrimental effect on performance because stress depletes a limited pool of cognitive resources that would have been allocated to task performance. Indeed, stress can reduce performance on certain effortful cognitive tasks, such as divergent thinking, where the underlying mechanism could be the reduced availability of cognitive resources. In contrast, Byron et al. (2010) hypothesized that stress might have a positive impact on performance by increasing arousal and motivation to derive solutions (i.e., increased drive) or, cognitively, by focusing attention on salient features of the problem space that can benefit the problem-solver. Indeed, negative emotion narrows the focus of attention – a likely scenario under conditions of stress. Finally, others have proposed a curvilinear (i.e., inverted-U) relationship between stress and performance. According to Gardner's (1990) activation theory, an increase in stress can improve performance up to a point, beyond which performance decreases. The inflection point in the curvilinear relationship occurs when the coping capacity of the organism has been exceeded, following which no further benefits can accrue from increasing the stimulus level.

The critical question in any curvilinear model is how an activating stimulus is experienced by the subject. Quantifying individual-differences factors that affect how people perceive and react to stressors (see Lazarus and Folkman 1984) allows researchers to measure how well a person can cope with a stimulus. To the extent that coping mechanisms have not been overwhelmed, an increase in stress should lead to an increase in performance; in turn, when coping mechanisms have been exceeded, any additional increase in stress should lead to a decrease in performance. People high in trait anxiety, for example, tend to perceive stressors as threatening and, as such, experience their psychological and physiological consequences to a higher degree, overwhelming their coping capacity and hampering their performance. In contrast, people low in trait anxiety tend to perceive stressors as challenges and feel motivated to overcome them, which can lead to improved performance. To model the stress-performance relationship accurately, therefore, one needs metrics for the levels of stress and performance as well as for the individual differences that influence vulnerability to stress.

## The Scope of the Present Chapter

This chapter sheds light on the stress-performance relationship, drawing on research in the context of routine military operations such as training. Toward that end, the role of stress in training in three different contexts will be discussed: (1) captivity survival training, (2) insertion and extraction training involving high levels of physical and mental stress, and (3) stress in simulated training environments. These three training contexts were selected specifically because they represent different levels and types of stress, and as such can reveal the various forms the stress-performance and stress-learning relationships can take. Critically, an examination of this literature will reveal gaps in knowledge in this domain, and point to ways in which continued research into the effects of stressors on learning and performance is needed to advance the state of knowledge on the impact of training-related stress.

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## Captivity Survival Training: Stress Inoculation at Work

What is the optimal method for preparing military personnel for the exceptionally stressful conditions on combat operations? According to *stress inoculation theory*, resilience to stress can be enhanced through training. Coping mechanisms that mitigate the effects of combat-related stress on performance can be taught using controlled exposure to realistic stressors (Stetz et al. 2007). Training must expose trainees to stress levels sufficient to activate their psychological and biological coping mechanisms without overwhelming their coping capacity. Consistent with activation theory (Gardner 1990), this approach involves locating the sweet spot in the curvilinear (i.e., inverted-U) relationship between stress and performance, such that individuals experience the maximal level of stress they can cope with. The

assumption is that people who can perform well under simulated conditions in training have developed the resilience to perform on the battlefield.

This approach is fundamentally similar to the train-as-you-fight doctrine, shared by many military units internationally (e.g., US Marine Corps, etc.). According to this doctrine, all training should be as realistic as possible. In practical terms this implies that “all training is to incorporate the highest degree of fidelity possible, and that no aspect of operations is to be ‘notionalized’ if a means to simulate it is available” (Canadian Forces 2005, p. 14). This doctrine has international resonance. For example, it guides training in the Royal Canadian Air Force, where high-fidelity simulation such as full-flight simulator is recommended for training personnel (Rawlings 2008), and it also represents a core training principle for the U.S. Army (Department of the Army 2012) as well as the Australian military (Australian Defence Force 2008). Aside from the physical and mental aspects of training, there is also growing recognition of this doctrine’s relevance to broader aspects of warfare such as military ethics. For example, Messervey (2013) has noted that “For military personnel to be ethically prepared for combat and operations, it is essential that ethics training be consistent with the Directorate of Army Training’s ‘Train as we intend to fight’ approach. When soldiers are engaged in battle, they experience extreme levels of stress that make it difficult for them to think in a rational and effortful way” (p. 46). Thus, there is broad agreement among militaries worldwide that the ideal approach to training involves a realistic representation of combat stress wherever possible, and to prepare personnel for all aspects of such stress ranging from the physical to the social-cultural ends of the spectrum.

Captivity survival training relies heavily on this approach. The intention is for trainees to acquire the necessary tools to survive capture by hostile forces. In the United States, the training is referred to as Survival, Evasion, Resistance, and Escape (SERE), which is typically a three-week course. Trainees are exposed to very high and uncontrollable levels of stress, including caloric and sleep deprivation, mock interrogations, and other physically and psychologically demanding experiences. Studies of SERE have shown that it causes significant perturbations in both psychological and physiological functions (Lieberman et al. 2005, 2015, 2016; Major et al. 2006, Morgan III et al. 2000a, 2000b, 2001a, 2001b; Taylor et al. 2007). SERE training has been shown to impair episodic and working memory and visuospatial and problem-solving abilities (Lieberman et al. 2005; Morgan III et al. 2000a, 2000b, 2001a, 2001b, 2006), and it was associated with significantly greater levels of self-reported dissociation, distortions in sensory perception, and an increase in endorsed posttraumatic stress disorder (PTSD)-like symptoms (Morgan III et al. 2001b), demonstrating that it is an effective stressor. The effects on cognition mirror those observed during U.S. Army Ranger training and the “Hell Week” of U.S. Navy SEAL training (Lieberman et al. 2005, 2009).

The stress of SERE training results in elevations in well-established biomarkers of stress, including cortisol, dehydroepiandrosterone (DHEA), neuropeptide Y (NPY), and epinephrine levels (Lieberman et al. 2016; Morgan III et al. 2000a, 2001a, 2000b). Because these biomarkers represent the activity of separate physiological systems (Morgan III et al. 2000a), stress-induced alterations in these systems

are consistent with the conclusion that SERE represents a valid ethological model for the study of acute stress in human beings. Of note, SERE training affected the physiological biomarkers of stress to a degree equal to or greater than alterations measured in individuals undergoing major surgery or actual combat (Morgan III et al. 2000a, 2000b).

Interestingly, certain patterns of hormone secretion in response to stress have been associated with effective coping. An effective stress response may be associated with rapid elevation of certain stress hormones, for example, such as NPY, in response to acute stress, followed by a return to baseline when the acute stress ends (Morgan III et al. 2000a). For stress inoculation theory to work (i.e., a situation in which realistic exposure to stress is expected to confer resilience against future stress), captivity survival training should induce a measurable increase in acute stress that returns to (near) pre-training levels shortly following the end of the course (Stetz et al. 2007).

The Canadian equivalent of SERE training is Conduct After Capture (CAC) training, which contains many of the core features of SERE training and has similar aims (i.e., stress inoculation through the experience of intense but transient uncontrollable stress). One major difference is that the length of the Canadian course is only four days. A recent study examined whether the shorter training accomplishes the same goals as longer training (Suurd Ralph et al. 2017). Data were collected on mood, fatigue, dissociation, PTSD symptoms, short-term and working memory, and salivary cortisol and DHEA at four time points: at baseline during the didactic phase of training, following a first interrogation, following a second more challenging interrogation, and at debriefing and recovery. As the researchers predicted, a curvilinear relationship between stress and time emerged across the four assessment points. Specifically, scores on all measures were degraded during training but recovered after completion of training, and almost all measures were most degraded following the second more intense interrogation. The data involving both salivary cortisol and DHEA indicated that the training induced stress, and the corresponding impairments in mood, fatigue, dissociation, and PTSD symptomatology indicated impaired psychological functioning. After training, levels of all stress biomarkers and psychological functioning returned to baseline or near-baseline levels, indicating that the changes were transient. Interestingly, the researchers found that mood assessed prior to training predicted successful completion. This finding has important practical implications for increasing the success rate of training in similar environments because it suggests that positive mood might act as a buffer against the deleterious effects of stress, promoting better course performance and resilience. It also demonstrated that by and large, trainees can recover fully from an intense bout of acute stress.

Captivity survival research has focused almost exclusively on trainees, but it is important to realize that such training can also affect instructors. Performing mock interrogations under extreme conditions, for example, can be stressful, and whereas trainees typically undergo training once, the instructors often lead multiple courses, sometimes in successive weeks. Vartanian et al. (2018) assessed stress levels among CAC instructors before and after the delivery of training in consecutive weeks, offering an ecologically valid opportunity to assess carryover of stress from 1 week to the next. The researchers found that delivering CAC training was associated with impairments in mood, fatigue, and sleep, and a reduction in the ratio of testosterone/

cortisol levels but that a three-day break between courses was sufficient to restore psychological and physiological function. This finding has important implications for trainer retention and recovery in contexts where limited access to qualified trainers necessitates that they administer multiple courses in succession.

Taken together, the results from the SERE and CAC studies show that captivity survival training causes significant increases in stress and transient perturbations in psychological and physiological function in both trainees and instructors, resulting in a training context that reflects what soldiers would experience in actual settings where the learning is to be applied. However, at present, additional research is required to examine whether such perturbations provide the skills and resilience needed to survive capture.

Arguably, one way to understand the impact of training-related stress on performance is to examine research findings from *systems neuroscience* – the discipline focused on understanding the functioning of large-scale networks in the brain. This is because understanding how the brain responds to stress can be useful in understanding the manner in which stress exerts downstream effects on behavior and performance (Hermans et al. 2014; Menon 2011). Large-scale networks in the brain are comprised of groups of regions that exhibit correlated activation during extended periods of awake rest. Three networks appear to be particularly important in the brain's response to stress. Immediately following the onset of acute stress, there is an increase in activity within the *salience network* – dedicated to orienting attention to environmental cues that are relevant for survival – as well as a strengthening of its connections with sensory cortices (e.g., vision). At the same time, there is a corresponding decrease in activity in the *executive control network* – dedicated to cognitive control in the service of higher-order cognition (e.g., planning, decision making). In turn, there is an increase in activity in the anterior *default mode network* – dedicated to emotion regulation and self-referential thinking – as well as a strengthening of its connection with the salience network in the service of memory consolidation. This state resembles a hypervigilant mode of thought during which the person is maximally tuned to environmental cues necessary for survival, and is regulating emotions and consolidating memories for subsequent recall/recognition. When in this state, one would not expect the person to learn content that requires higher-order cognition, but the person can nevertheless perform and encode content into memory that is relevant for survival. This dissociation can perhaps explain why extreme stress (e.g., captivity survival training) can hamper executive functions but nevertheless be useful for teaching trainees the basic skills that they need to ensure survival in theater in the future.

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## Extreme Stress in Military Training: Insertion and Extraction Training

While few military courses cause the extreme stress experienced in SERE or CAC training, military training often includes stressors associated with the battlefield. One course known for its arduous training is the Patrol Pathfinder (PPF) course, which trains specialist soldiers in land, air, and sea insertion and extraction. The course

includes many challenging physical and mental stressors (e.g., physical strain, exertional fatigue and sleep deprivation, energy deficit, external load from equipment carried, and climatic conditions), and is designed to be especially arduous to reflect the environment in which PPF forces operate. Because of its content and structure, PPF offers one the opportunity to study the relationship between stress and performance, including an examination of the mental and physical attributes related to course completion and the effect of stressors on the human body.

It is well known that the physiological and psychological demands of operational training can result in hormonal alterations. Indeed, blood cortisol levels in PPF candidates accurately profiled the stress levels of the course: Levels were significantly higher during periods of physical and mental intensity, and returned to baseline when activities ceased (Boscarino et al. 2016). In turn, testosterone is a hormone known to decrease with intense stress. Blood levels of testosterone also reflected the intensity of the PPF course: Testosterone levels decreased as the course intensity increased, a result consistent with the findings of Szivak et al. (2018) among sailors and Marines undergoing SERE training in the United States. Further, those who successfully completed the PPF course exhibited significantly higher blood lactate levels, red blood cell count, and hematocrit levels, a profile which is consistent with the literature in that regular and intense exercise increases the number of red blood cells and hematocrit levels. Complementing this finding, blood cortisol levels also reflected self-reported psychological distress scores on the Kessler Psychological Distress Scale (K10) in candidates who failed to successfully complete the course (Boscarino et al. 2016; Boscarino and Sullivan-Kwantes 2019). The significant and high correlation between distress scores and blood cortisol levels suggests that greater levels of experienced distress may be a contributing factor to training failure.

Recent evidence suggests a link between baseline stress hormone levels and performance in military training. Specifically, lower levels of blood cortisol were observed among PPF candidates who passed the course than among those who failed it (Shia et al. 2015). Similar findings have been reported in the United States in relation to captivity survival training (see Morgan III et al. 2009). Furthermore, candidates who passed the course also reported higher levels of DHEA-S at the start. DHEA-S is a hormone which has been shown to have neuroprotective properties in military men (Taylor 2013), which would appear to be critical in high-stress environments where rapid information processing and decision making are critical for operational success. These results suggest that success in training can in part be predicted based on a candidate's initial vulnerability to stress, and the ability to regulate it. Furthermore, the fact that similar patterns of results have emerged in Canada and the United States suggests that the findings are reliable and replicable despite variations in methodology and subjects.

There also appears to be a correlation between DHEA-S levels and information-processing capacity, such as working memory. For example, in a group of active-duty Air Force members, Shia et al. (2015) found that higher DHEA-S levels and lower cortisol levels were related to faster working memory responses, suggesting it might be possible to identify stress-resilient individuals. In the PPF course, working

memory scores were significantly higher among those who passed the course than among those who failed it (Boscarino et al. 2016; see also Boscarino and Sullivan-Kwantes 2019). In sum, what these findings suggest is that aside from one's vulnerability to stress, cognitive capacity can also be used as a predictor for successfully completing stressful training. Greater cognitive capacity has been shown to enable both greater information-processing ability as well as provide greater motivation to engage in cognition – both of which could contribute to better performance (De Dreu et al. 2012).

## **Physical Stress and Performance**

Training-related injuries due to physical stress are a common occurrence during military courses, accounting for more than 80% of soldiers' noncombat-related injuries in the U.S. Army (Molloy et al. 2020). In the PPF course, training-related injuries accounted for over 50% of the attrition rate. This is particularly important from a military readiness perspective because reductions in the number of trained personnel decrease military's operational capacity (Molloy et al. 2020). Further, research has shown that the best predictor of a future training-related injuries is a previous one. Indeed, in the PPF course for example, pre-existing injuries were found to be a significant contributing factor to attrition.

Apart from physical stress, evidence suggests that one's beliefs about one's pre-existing injuries can also influence performance outcomes. For instance, 67% of soldiers who failed the PPF course were concerned that their pre-existing injuries, such as a knee injury or back, would negatively impact their ability to complete the course. In contrast, soldiers who passed the course did not feel that their pre-existing injury would interfere with their ability to complete the course. This finding is consistent with the larger literature according to which anxiety due to anticipatory stress can affect functioning of the goal-directed attentional system (Eysenck et al. 2007), thereby impairing performance.

## **Physiological Response to Anticipatory Stress**

A person's inability to cope with stress can produce negative emotional states, such as anxiety. Negative emotions can in turn trigger a biological stress response, activating the release of the hormone cortisol, through the activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis. One way to study how anticipatory stress can impact performance is to learn from athletes, because like soldiers they must perform under stressful conditions. As such, studying how athletes respond to stress has the potential to shed light on soldiers' performance under stress. It has been shown that the anticipatory cortisol response, known to be triggered by the anticipation of stress, can affect sports performance through its influence on cognitive processes (van Paridon et al. 2017), further highlighting the important interaction between emotion and cognition (Barrett and Armony 2006).



When assessing the cortisol response, therefore, it is best to assess the magnitude of the response at the start of the competition, thereby differentiating it from exercise-induced changes in cortisol levels following competition (van Paridon et al. 2017).

Some researchers have proposed an inverted U-relationship between cortisol and performance, where moderate levels positively influence performance and low and high levels negatively influence it (van Paridon et al. 2017). On Day 1 of the PPF course, candidates who passed the course already had higher blood cortisol levels than baseline, but lower blood cortisol levels than those who failed the course. In addition, those who passed the course performed significantly in higher working memory test scores at baseline and reported lower scores of anxiety and distress on Day 1 and throughout the course. This pattern of findings suggests a close link between psychological and physiological measures of stress and course performance, and it points to stress regulation as a possible mechanism for buffering the deleterious effects of stress.

Research in this field also extends to the examination of personality, and has demonstrated that certain personality traits are associated with better or worse performance under stress. A high score on the factor openness to experience, for example, is correlated with high motivation to learn and to achieve a set goal (Major et al. 2006). Conversely, avoidance motivation (i.e., fear of failure leading to avoidance of goals, debilitating anxiety, withdrawing, and disliking school) was found to be associated positively with neuroticism and negatively with openness to experience (Komaraju and Karau 2005). When personality traits were assessed using the Big Five model in PPF candidates at baseline, those who passed the course scored higher on openness to experience and lower on neuroticism than those who failed the course. Further, soldiers who failed the PPF course reported significantly higher anxiety scores on Day 1 and throughout the course, further supporting the relationship between anxiety and cognition. With regard to performance, the same candidates consistently reported higher distress scores (K10) throughout the duration of the course (Boscarino and Sullivan-Kwantes 2019). These findings suggest that personality can moderate or mediate the relationship between stress and performance under demanding training conditions. These types of studies further contribute to the understanding of the underlying individual differences that moderate and mediate the effects of stress on learning and performance.

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## **Stress in Simulated Training Environments**

The studies summarized above show that military training can impose significant stress even in experts, sometimes to the point of severely disrupting learning and performance. Opinions differ as to how much different types of training can induce stress in trainees, however, and thus whether specific training methods induce enough stress to support specific training objectives. As discussed in Farrell and Jarmasz (2020), training using simulators (as opposed to field exercises or courses with scenario-based training using live actors) can provide trainees with basic skills but cannot adequately simulate operational stressors. In the sections below, the focus



will shift to how military training tasks performed using simulated environments can result in significant stress in trainees, and a discussion of how the stress they experience can affect learning and performance.

## Searching for Threats in a Simulated Visual Environment

Military personnel must contend with threats during operations. For example, during Canada's combat mission in Afghanistan (2002–2010), Canadian Armed Forces personnel had to contend with the threat of improvised explosive devices (IEDs). This was not a problem unique to the Canadian Armed Forces. For example, IEDs accounted for 45% of all American deaths in operational war zones in the period 2006–2020. Being constructed from locally available materials and concealed, IEDs are very difficult to detect, even with sophisticated sensor technologies (Jarmasz et al. 2010). As a result, soldiers deployed on operations where IEDs were frequently used had to be vigilant. Anecdotal reports suggest that experience in such environments developed an intuitive awareness of IED threats in soldiers that they could not easily explain, often accompanied by physiological sensations, informally known as a “spidey sense” (Zotov et al. 2011).

Researchers have also investigated threat awareness to determine whether it was a trainable skill or a spurious phenomenon. For example, interviews with Canadian Armed Forces personnel who were deployed to Afghanistan suggested that IED detection depended on a body of knowledge that combined an understanding of IED construction and the opportunities for carrying out IED attacks afforded by different types of terrain (see Jarmasz et al. 2010). Investigation of actual IED threat detection behavior by personnel in theater would have been highly impractical and dangerous for obvious reasons; thus, researchers investigated the IED spidey sense and its physiological correlates by simulating IED search tasks using videos recorded in Afghanistan (Keillor et al. 2007; Zotov et al. 2011). The videos were obtained during convoy operations in Afghanistan, and while none depicted actual IED incidents, they were vetted by subject matter experts (SMEs) with operational experience and deemed to depict scenarios where IEDs could have been deployed against the convoy. Such study designs are useful in assessing the effects of simulated training-related stress on performance.

Keillor et al. (2007) investigated IED threat awareness by showing these videos to personnel with and without operational experience in Afghanistan. Participants were provided the same information on IED indicators that personnel were given in pre-deployment training, and instructed to press a button when they thought the video depicted a location where an IED could be concealed. Participants' eye movement parameters (i.e., fixations and saccades) were recorded. Notably, the eye movements of participants without deployment experience seemed to follow patterns found in studies of eye movements during driving (i.e., fixations and saccades mainly along the horizon, looking ahead for road conditions), whereas those of experienced participants did not follow the horizon and instead seemed more consistent with the close inspection of specific objects in the scene. The

experienced participants were debriefed after viewing the videos to explain their search behavior. Many experienced personnel reported feeling “as though they were there,” suggesting that the videos simulated the visual experience of searching for IED threats in an operational environment. These findings suggest that operational experience has the potential to alter one’s visual search behavior in relation to a simulated threat, such as IEDs.

Focusing on the physiological correlates of IED search behavior in a simulated environment, Zotov et al. (2011) compared eye movement parameters between participants with and without operational experience in Afghanistan. In addition to instructing participants to identify scenes depicting possible IEDs, the investigators also engaged the participants in visual search tasks deemed to be affectively neutral (i.e., identification of landmarks in video from urban environments), and measured heart rate variability (HRV) while participants performed both of these tasks. The results of the HRV analysis revealed that the experienced participants had HRV parameters associated with higher stress when viewing the IED threat videos than participants without deployment experience. In addition, they exhibited higher stress-related parameters when actively identifying IED threats in a scene. In contrast, the experienced participants’ HRV parameters were consistent with lower stress when watching the neutrally affective videos than the IED threat videos, suggesting that the elevated stress was context-specific and experience-driven.

Analysis of the eye movement data from the IED threat videos showed a pattern consistent with findings by Keillor et al. (2007), namely, closer and more frequent inspection (i.e., more fixations, shorter saccades) of potential IED threats by participants with deployment experience. This pattern was not observed with the affectively neutral videos. Together, these findings suggest that experienced participants appraised the IED threat videos as depicting more stressful content than did participants without deployment experience. This is consistent with the notion that deployment experience can alter attention and inspection patterns, but that the effect is present only for contextually relevant and semantically salient content.

As discussed above, it is not possible to assess these findings against objective norms of IED search performance. Nevertheless, the more systematic search patterns by experienced participants combined with the knowledge elicitation from SMEs discussed above suggest that the patterns exhibited by participants with deployment experience reflect a body of knowledge that helps deployed personnel discriminate between various types of operational threats. These findings also show that the behavioral patterns exhibited by experienced personnel during IED search tasks in a simulated visual environment can be accompanied by a stress response, thereby providing a biological signal that can be used to orient attention to potentially threatening stimuli in the environment.

Importantly, insights into physiological correlates of threat can also lead to important applications and improvements for training. For example, based on the findings described above, Zotov et al. (2014) developed an instructional intervention to augment IED awareness skills during pre-deployment training for servicemembers deployed to Afghanistan. This training tool used videos of Afghanistan to illustrate patterns of IED indicators in a variety of scenarios, and showed that

personnel with no prior deployment experience could nevertheless learn to assess IED attack indicators in a manner similar to SMEs assessing the same scenarios. Such studies show that knowledge gained about the physiology of simulated-threat detection involving experts can be used to adjust training approaches for non-experts, thereby contributing significantly to pre-deployment training.

## **Stress in Marksmanship Training and Performance**

The effects of psychological stressors – such as competition, social pressure, time limits, high workload, and hostile fire – have been extensively investigated in recent years (e.g., Torre et al. 1991 for competition, frustration, and social pressure; Nieuwenhuys and Oudejans 2011 for time limits; Scribner et al. 2007 for workload). However, no clear evidence has emerged that these stressors affect performance of motor-cognitive skills, such as marksmanship. Obviously, the measurement of the effects of stress on marksmanship during actual combat operations is not practical; nevertheless, indirect evidence from laboratory studies suggests a connection between psychological stressors and marksmanship performance. For example, Torre et al. (1991) showed that competition impairs the accuracy of shooting when the participants were under time limits. Kerick and Allender (2004) tested target exposure time and found that the stress induced by high cognitive workload affected shooting performance when the target exposure was short. The type of target also induced stress and affected performance. Hard-to-hit targets (e.g., distant targets, short exposure time, moving targets), for example, induced stress and affected marksmanship performance (Torre et al. 1991).

The studies above suggest that the marksmanship task itself is inherently stressful, apart from the stressors particular to combat. Given that military personnel must maintain minimum marksmanship proficiency standards through regular training and testing, it is important to prepare soldiers for the stress of marksmanship during training. A number of stress management techniques have been adopted to cope with combat stress. Tactical breathing, which is based on stress inoculation training mentioned above, is one of the simplest and most effective techniques to reduce acute stress. Another method of stress management is biofeedback, which involves self-regulation of physiological states. Bouchard et al. (2012) tested the effectiveness of the Immersion and Practice of Arousal Control Training (ImPACT) technique – an approach that included biofeedback and tactical breathing – in reducing symptoms of stress. The study used virtual combat settings based on a video game that was scripted from the Afghanistan context. A graphical interface linked the physiological stress indicators (i.e., heart rate and skin conductance) with visual and audio feedback in a video game. In addition to heart rate and skin conductance, salivary cortisol readings were also taken to measure stress levels. The study showed the effectiveness of the ImPACT technique in reducing stress when tested against a no-stress control condition.

A pilot study by Adams (2013) investigated the effect of tactical breathing and biofeedback on marksmanship performance under stress-inducing conditions in

the Small Arms Trainer – a simulated range that replicates a typical live range. The stressors used were competition, weapon malfunction, and time pressure. The physiological monitoring equipment measured participants' heart and respiration rates, skin conductivity, and salivary cortisol levels. The State-Trait Anxiety Inventory (STAI; Spielberger et al. 1970) was administered prior to the trial and during the debriefing session. Responding to the post-experimental questionnaires, participants reported that shooting under severe time pressure and shooting in front of others were the two stressors that affected them most. The stress measurement methods used in the trials can be applied to future studies that investigate different stressors in controlled experimental settings involving military personnel.

A similar stress inoculation approach that combined biofeedback and tactical breathing in marksmanship training was conducted by Lotfabadi et al. (2020). The study tested novice civilian shooters in a controlled indoor shooting range using real weapons and ammunition (as opposed to the simulated shooting task in Adams 2013). The stress level and shooting accuracy were compared between stress inoculation and control groups, and HRV analysis was used to measure stress level. All shooters experienced measurable elevations of stress during the task. While shooting performance was not different in the two groups, the stress inoculation group maintained a low stress level through the task. These findings together with the studies summarized above suggest that stress inoculation-based approaches can be effective in managing stress in a range of marksmanship contexts (live fire and simulated ranges, military and civilian shooters).

The studies described above are consistent with the findings reported in the broader marksmanship literature: Marksmanship is an inherently stressful task, even though simulated marksmanship tasks (for training or research purposes) do not induce as much stress as combat. Stressors in marksmanship are related to the parameters of the task itself (e.g., target size or distance) or to the training scenario in which it is embedded (e.g., time pressure, simulated combat threats). These stressors can serve as the basis for implementing stress inoculation-based interventions in marksmanship training to overcome the effects of stress and to better prepare personnel for combat situations.

## **Tactical Combat Casualty Care Training**

“Combat casualty care” and “pre-hospital/combat casualty care” are generic terms used for the skill set taught to combat medics (formally known as medical technicians) to treat pre-hospital trauma care in the battlefield (NATO Task Group HFM-242 2020). In the United States military, the guidelines for combat casualty care are governed by *Tactical Combat Casualty Care (TCCC or TC3)*, and routinely updated by the Committee on Tactical Combat Casualty Care (CoTCCC). Initially, TCCC was taught to physicians attached to Navy SEAL units, but it has since been adopted by the other military branches and taught to combat first responders. Indeed, TCCC is now a mandatory course for deploying United States medical personnel (Bradley et al. 2017).

In turn, in the Canadian context, the *Tactical combat casualty care (TCCC)* course is taught as part of each brigade's pre-deployment training cycle. It has long been acknowledged that simulated stress plays an important role in casualty care training. For example, in TCCC training, trainees must perform complex clinical procedures, such as inserting nasal pharyngeal airways and needle decompressions, because they must be able to recognize how patients' bodies respond to these procedures while coping with the stress of being responsible for the life of another person in battlefield conditions (Kim et al. 2017). These concerns have motivated different choices around training modes for casualty care training, in particular the use of non-human live tissue training (LTT) models, which are considered to provide more physiological realism and be more effective at simulating the stress of caring for a living patient than medical training mannequins (Savage et al. 2015). Nevertheless, the practitioners in this training community see the importance of using medical training mannequins – hereafter referred to as high-fidelity patient simulators (HFPS) – for a number of reasons, including better repeatability and control of the training experience and animal welfare considerations.

While both LTT and HFPS are used in casualty care training, some have questioned whether HFPSs provide the necessary psychological realism (including the stress aspects) needed to train combat medics (Kim et al. 2017; Savage et al. 2015). In response, research was designed to compare learning outcomes, stress measures, and self-reported confidence ratings for combat medics undergoing casualty care training using either LTT or HFPS (Peng et al. 2018; Savage et al. 2015; Vartanian et al. 2017). The study looked at skill acquisition in an instructional operating room and skill proficiency in a field assessment, a simulated battlefield condition using both LTT and HFPS training. Self-report (using the STAI) and physiological measures of stress (salivary cortisol and blood catecholamines) were measured throughout the training and assessment phases of the study. In addition, cognitive performance was measured using working memory and short-term memory measures. Half the participants underwent field assessments using the same training mode they had used in the operating room, whereas the other half switched modes before undergoing field assessment (i.e., LTT in the operating room and HFPS in field assessment, or vice-versa).

Results showed that participants acquired TCCC skills and performed them equally proficiently under field assessments with both training modes. However, those participants who switched modes between training in the operating room and the field assessment performed worse on assessments than those who did not switch. This indicates that neither mode provided an advantage in developing proficiency with the other. Importantly, participants in both training modes exhibited comparable stress levels on the self-report and physiological measures, and stress levels increased between the training and assessment phases of the study. No differences in stress between training modes were detected, except for increased blood catecholamines in participants who switched modes between training and assessment. Not only did many participants perform casualty care procedures well during the field assessments (as assessed by experienced instructors), but many also showed

improved working and short-term memory performance during the assessments. These findings indicate that casualty care training can induce significant stress in trainees, even when using an artificial patient (HFPS). Further, the findings suggest that stress experienced during casualty care training is associated with improved as opposed to reduced cognitive performance – a theme that has emerged elsewhere in this chapter.

## Summary

This chapter examined the impact of training-related stress on performance in many military training contexts, primarily in the United States and Canada (Table 1). As can be seen, in every case personnel were exposed to a variety of psychological and physiological stressors. The review of this diverse body of work demonstrated that stress interfered with good performance in some cases, but improved it in others. Indeed, this research supports two competing views of stress in training. According to one view, training is an opportunity to improve self-regulation skills and develop resilience against the stressors of combat. According to another view, the stress of training supports state-dependent learning because it helps encode new knowledge in a way that is cued and retrieved by stress. As such, the purpose of training is to simulate the stress of combat as realistically as possible, regardless of self-regulation capacities or the meaning of stressors for learners. These two views entail two different training strategies, both of which need further empirical investigation. However, the best way to account for the available evidence likely involves an integration of these two viewpoints. Specifically, it appears that the instantiation of the optimal level of stress that can both mimic key aspects of the operational environment while not overwhelming the coping capacities of personnel would be ideally suited for promoting training-related learning. Needless to say, due to individual differences in coping mechanisms, this optimal level will vary across individuals, a key factor that needs to be taken into consideration when designing training for military personnel. In addition, the understanding of the effects of training-related stress on performance in the military can improve by examining how the brain responds to stress, which can in turn point to specific types of content that might be more encodable than others when levels of stress are high.

**Table 1** Varieties of training contexts and associated types of stress

Training	Stress type
Captivity survival training	Sleep deprivation, caloric deprivation, interrogation, social evaluation, trauma, emotion
Patrol Pathfinder training	Cognitive overload, physical strain, sleep deprivation
Searching for threats in simulated visual environments	Re-experiencing traumatic events, physical and psychological exertion related to prolonged vigilance
Marksmanship training	Competition, time pressure
Tactical combat casualty care training	Time pressure, exposure to physical wounds

Furthermore, the work in this area points to the moderating and mediating effects that social, contextual, and individual-differences factors exert on the relationship between stress and performance. Individual differences in one's ability to regulate the impact of stress on performance, for example, need greater recognition in the military. In terms of simulating stressful conditions, this research shows how experience affects learning and suggested ways to optimize learning. In this sense, the field needs a more refined understanding of what constitutes expertise in both domain-general as well as domain-specific terms, and how to distill and teach its essential features during training. It is expected that the work reviewed here will serve to generate hypotheses that motivate further research on this important topic in military performance.

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# Military Leadership: Concepts and Theoretical Approaches

Franz Kernic, Martin Elbe, and Gregor Richter

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## Abstract

Leadership is a key concept in military organizations which refers to processes of direct influence and command. In this chapter, the subject, basic concepts, and central issues of military leadership are described. General leadership concepts

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F. Kernic  
Military Academy at ETH Zürich, Zürich, Switzerland

M. Elbe (✉) · G. Richter  
Center of Military History and Social Sciences of the Bundeswehr, Potsdam, Germany  
e-mail: [martinelbe@bundeswehr.org](mailto:martinelbe@bundeswehr.org)

such as military leadership myths and archetypes as well as leadership theories in philosophy and the social sciences show the broadness of the ideas about leadership. Theoretical approaches, explanatory models, and empirical findings concerning military leadership are discussed in this paper, too. Leadership concepts in modern armed forces finally help us to improve our understanding of nowadays military leadership.

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### Keywords

Command and control · Coordination · Leadership · Leadership styles · Leadership theories · Military sociology · Social control

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## Introduction

Leadership is a key concept of military organization. The frequent reference to the leadership tasks of military cadres, the high value placed on leadership training, and the reference to an experience of leadership in military service bear witness to the intensity with which images of leadership are passed on in the military. However, the term is marked by a high degree of vagueness. Not only does it display an enormous range of content and connotations, but it also conveys value judgements (e.g., good/evil; effective/noneffective; ethical/unethical) that go hand in hand with emotionality. Leadership is much debated in the military, especially what constitutes good and effective leadership and how it should be practiced.

Any scientific discourse on military leadership assumes that people have always had concrete ideas about leadership. These images mirror individual experiences as well as a collective cultural memory. These images can change, i.e., they are not just images of real conditions and experiences, but something that can be shaped and formed (*ideals, concepts, models, idolizations, etc.*). Leadership can generally be defined as social influence. Leaders change through their words (ideas and visions) and/or deeds (action); they pit a certain thinking, feeling, and behavior in other people. Leaders motivate, inspire, guide, and lead (as leaders, instigators, guides, etc.).

The term military leadership refers to processes of influence and command in connection with the military and warfare. The specificity of military leadership results from the dense intertwining of these processes with the violent character and the hierarchical structure of the military organization. The military hierarchy is a one-dimensional concept of leadership: Social influence on the behavior of people is exerted by a single person at the top of the hierarchy who is able to steer the thoughts, feelings, and actions of subordinates through his or her words and deeds; his or her orders are translated directly into military actions. A chain of command and command structure enables social influence to move from top to bottom by means of a chain of command and to reach all levels of the organization (Menth 1974; Berg 1976; Kernic 2021). Within the chain of command, a clear distinction

can be made between the sender of the command (leader) and the recipient of the command (follower).

Of course, there are deviations from this ideal of everyday military life: withdrawal (desertion), failure to carry out an order, refusal, or mutiny. Nevertheless, the military (to this day) adheres to the idea of totality and the concept of a mechanically organized control of human actions. Consequently, social mechanisms are established to prevent deviant behavior. The most important tools encompass disciplining, coercion, surveillance, social control, and punishment, as well as incentives through (material and ideal) reward, the prospect of social advancement or motivation.

The common understanding of military leadership can be illustrated using the example of the Swiss Armed Forces: In the units, training as a military leader begins at the lowest level, by teaching the so-called 3Cs as the 101 of military leadership – command, control, and correct (Swiss Armed Forces 2007, doctrine 70.013). It is argued that running a military organization – and the key to success and to achieving objectives – lies in the consistent implementation of this three-step military leadership.

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## **Military Leadership: *Subject*, Basic Concepts, and *Central* Issues**

A comparison of lexical definitions of leadership shows major shifts in the content and field of reference of this term throughout history. In German-speaking countries, the term “Führung” gained social importance especially at the beginning of the twentieth century. The widespread and ideological-political usage of this term in the first half of that century – in connection with the authoritarian regimes of the era – led to reservations about its use in everyday language after the end of the World War II. At the same time, this promoted the gradual introduction of the Anglo-American concept of leadership and its incorporation into German language use (Neuberger 2002: 48 ff. and 7–11).

When talking about leadership in the military in general, three levels of command and control relations occur. On the level of social groups (e.g., squads and platoons) personal guidance is referred to as leadership and is intended to promote social efficiency in the coordination process. The informal leadership component, the balance of interests in direct contact, is particularly important here. The next higher level is that of commanding units and forces (command and control). This is not about personal relationships, but rather about the [means-end relation](#) and level of ambition communication (economic efficiency). At the top level there are political requirements to be managed in a way to reach effective enforcement of collective interests. The question to be asked here is: What interests are being pursued? And directly related to this: Whose interests are being pursued? (Elbe 2020).

When discussing military leadership in this paper we refer to interactions in social groups. Most definitions of leadership on this level share three core elements: a) a reference to the existence of a *basic structure of an interpersonal interaction* distinguishing between the leader and those being led; b) the assumption of a

transformation of the social relationship (process); and c) an indication to intentional social influence to achieve certain goals (Hunt 1996; Northouse 2007; Bass 2008; Yukl 2010; Blessin and Wick 2014 Kernic 2021). Neuberger (2002: 31) provides an action-theoretical definition: Actor A carries out action X in relation to actor B in situation C and causes Y. Therefore, leadership describes a course of action that is based on a cause-and-effect relationship. For the military, orientation toward a mutual objective is central, i.e., it is a matter of concentrating all available forces to achieve this very objective (cf. Neuberger 2002; Rosenstiel et al. 2005). In war, this objective means repelling an attack or subduing the enemy, i.e., military victory (primary task); in peacetime, further organizational objectives are added (secondary tasks). A central question is apparent: Which methods and means of social influence have the highest probability of success in military practice? While for some, strict command and execution, enforced down to the last detail, appears to be the central prerequisite for the consolidation of all forces (*directive leadership*), others see a minimum of freedom and autonomous thinking/acting as indispensable for people to work in the best possible way to achieve certain goals (*mission command*).

The concept of leadership can be clarified by distinguishing two types of leadership: firstly, *direct* or *interactional leadership*, wielding social influence by way of direct communication between individuals; and secondly, *indirect leadership* through structures and norms (*structural leadership*). In addition, with regard to theory development, it is above all leadership concepts that are gaining in importance (Glasl and Lievegoed 1993: 134 f.). The following *subconcepts of leadership* can be emphasized (Kernic 2021):

- *Leadership theories*: This term refers to basic assumptions used to explain leadership processes; at the same time, they are based on assumptions about a concrete view of the individual and the world.
- *Leadership behavior and leadership styles*: These terms refer to the specific behavior of leaders, their respective behavioral preferences, and typical patterns of behavior (leadership styles).
- *Management procedures, techniques, and instruments*: These terms refer to the development of standardized management procedures and the methods, techniques, and means (tools) used.
- *Leadership process*: This term shows the process of intentional social influence on other people's actions and ways of thinking.
- *Leadership structure*: This term comprises those elements that significantly influence or shape the leadership process.

The following questions appear to be particularly important regarding military practice: What command structure and what command procedures do armed forces require in order to achieve their objectives? What makes a military leader successful? What command methods and techniques are particularly suitable for exerting social influence and control? How can appropriate leaders be selected for the tasks to be performed? How can leadership be taught and trained?

Of course, the interest of social science research goes beyond this practical and application-oriented reference and aims to explain and understand military leadership: What factors determine processes of military leadership? Are they people, situations, or structures? What role does the human factor play and what significance does interpersonal communication have in everyday leadership? What is the significance of norms and how does military leadership become structurally entrenched through actual practices (e.g., ceremonies, rituals, drill, etc.)?

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## **Leadership in Society and the Military: Dimensions in the History of Ideas**

Guiding principles and practices of leadership are always embedded in an overall sociohistorical context. Even in archaic cultures, specific leadership structures developed in which people assumed roles with different social status and unequal opportunities for social influence. As a result, processes of social differentiation led to the development of competing ideas of leadership, and leadership was determined and practiced differently in the respective social sectors. The differentiation of social leadership into political, religious, economic, and military leadership went hand in hand with the social emergence of divergent activities and social roles. What is striking in these development processes is the concentration of political and military power in the hands of one person or a certain social leadership elite (Kernic 2021).

The close ties between the fields of politics and the military is historically apparent: Political leaders were at the same time military leaders and political control was based on military force. It was, above all, war that seemed to be the ultimate arbiter on the success or failure of leadership structures. Only in classical Greek antiquity – and later with the development of the modern state – was an attempt made to draw a clear line between politics and the military, between political and military leadership. Even in modern democracies, based on the rule of law, relicts of the original unity are still discernible, for example, in the constitutional regulation of the supreme command of the armed forces. This is held by the civil Federal Minister of Defense in the Federal Republic of Germany in peacetime and the Federal Chancellor in wartime. In the case of France and Austria, the supreme command of the armed forces is held by the President of the Republic; in the USA the president is the supreme commander of the armed forces; in the UK it is the prime minister.

## **Military Leadership Myths and Archetypes**

Traditions of basic social and cultural convictions and leadership myths still shape the image of leadership today. Three questions appear to be of particular importance in this context: a) Which conceptions of man determine the ideas of leadership that exist in the military? b) Which basic philosophical convictions can be found regarding the how and why of leadership and how are they justified? c) Which central leadership myths constitute the cultural memory of military organizations?



And which archetypes of leadership (primeval images) emerge? (Neuberger 2002: 58–69; Blessin and Wick 2014: 23–45; Kernic 2021: 10–12).

Regarding the first question, an *instrumental* idea of man prevails in the military. The human being (= soldier) is primarily seen as a tool in the service of the organization who stands at its disposal and who can be ordered to carry out certain tasks. Soldiers are even expected to be willing to sacrifice their lives for a higher cause. In principle, the achievement of military organizational goals is priority over the self-realization and the life of the individual. The group and the military unit are always more important than the individual. The individual is believed to be able to fit smoothly into the military organization (voluntary socialization), but in practice certain motivational and coercive measures seem to be unavoidable in many cases. In pluralistic, free democracies the instrumental conception of man is waning. Here, the human being is granted personal rights and certain military sanctions and coercive measures are prohibited. Nevertheless, it is generally expected of the human being as a soldier to integrate as smoothly and as seamlessly as possible into what's conceived as a big military organizational machinery (military socialization). The idea that he or she should not just be forced to do so, but, above all, be motivated by incentives and conviction, is a special characteristic of the concept of military leadership in liberal democratic societies.

The second question concerning the basic convictions in the military with regard to the why and how of leadership can be answered with reference to the hierarchical order of the military organization: The central assumption is that command must be given by one person at the top. The idea of a self-organization of systems is foreign to the military. Rather, the conviction prevails that action (= active leadership) is inherently necessary to create the necessary military unity. Without leadership, targeted bundling of all forces (conceived as the mechanical use of all available instruments and systems controlled by a central command) cannot be achieved. The question of how military leadership is to be achieved is usually answered to the effect that the desired social influence can best be guaranteed by means of an authoritarian power in the hands of the leader. Successful military leadership requires not only the existence of a leader but also a concentration of authority and power in his or her person. If such a maximum of authority and power becomes apparent in the person of the military leader, then the readiness to obey and the social recognition of the claim to leadership increase at the same time.

With regard to the third question, the central leadership myths and archetypes of military leadership (Neuberger 2002: 58–69), we can observe the following: Images of idealized leaders and commanders are not only omnipresent in narratives and depictions of military life, but such images are always used specifically as tools of leadership, i.e., for purposes of motivation, enthusiasm, socialization, and obedience. The motivational power of military leadership myths derives mostly from their connection with ethical-moral value judgements or a military doctrine of virtue. At the heart is the idealized (model) image of a military leader, who is nearly always male. The central archetypes of military leadership are still men: on the one hand, the hero, who is characterized by courage and particular bravery; on the other hand, the father, who cares for his subordinate soldiers and leads them on the right path.

Finally, there is the mind (spirit, inspirer), from whom team spirit, fighting spirit, and vitality flow and who embodies military virtues and military ascetic way of life (Neuberger 2002: 109–130). Because of the special need for cohesion, comradeship is very important in the military. The fundamentally positive strengthening of cohesion can also lead to group pressure and social closure and foster subcultures with their own rites. Such incidents often serve the clarification of the meaning of informal leadership, i.e., the question: Who is actually leading? Subcultures and rites can be linked to unwanted traditions or illiberal attitudes, but this is not necessarily the case (Elbe 2020). Such problems, as well as general attacks and forms of abuse of leadership positions, are reported in many cases (e.g., in the German case the Information from the Parliamentary Commissioner for the Armed Forces: German Bundestag 2020). An extreme form of this kind of leadership practice is described in the Australian Brereton Report: “Typically, the patrol commander would take a person under control and the junior member [...] would then be directed to kill the person under control” (The Inspector-General of the Australian Defence Force 2020: 29).

## Approaches to Systematic-Philosophical Thinking About Military Leadership

In addition to such myths, systematic-philosophical and social science thinking about aspects of human leadership and principles of practical leadership action (general leadership principles) play an important role in modern armed forces. Thoughts and fundamental insights or assumptions from philosophical and scientific discourses are reflected in various ways in military leadership concepts and documents (Kernic 2021).

Plato, Xenophon, and Machiavelli represent the classics of philosophical-political thinking about the military and military leadership. In the nineteenth century, Clausewitz’ approach in particular receives great attention. In sum, over the centuries, a strong connection between human leadership and aspects of soldierly virtue and the talent for army and warfare was evident. Plato (2006–2009) changes this conception by extending successful human leadership systematically on the basis of ideas of justice, harmony, and peace, all of which are to ground a successful social life of coexistence. In the *Nomoi* he no longer presents the ideal leader merely as a lover of wisdom, but as a legislator who lays down rules and watches over their validity and authority. Above all, Plato’s definition of *Arete* (diligence) becomes important for the military because it describes virtue and diligence, the excellence of a person and a thing. It is also linked with fighting and warfare (i.e., to prove oneself in a warlike conflict). Plato’s ethics are particularly suitable to draft a military doctrine of leadership and virtue. Guiding principles of leadership translate into principles of a reasonable and virtuous social life: balance, observance of the right measure, fulfillment of duty, modesty, and prudence; striving for knowledge and wisdom; as well as exemplary behavior.

Xenophon (2009) devotes his works *Anabasis* (The March of the Ten Thousand or The March Up Country) and *Cyropaedia* (The Education of Cyrus) to two interlinked aspects of leadership: on the one hand, the reflection on successful leadership in a war situation; on the other hand, he ponders how the education and training of an ideal leader (army and state leader) should be organized. Xenophon stresses the importance of the *character* and *abilities* of successful leaders, who are to be shaped in their personality through education, training, and testing to become successful leaders. His principles of successful leadership are still taught today in everyday military life: simplicity, uniformity, flexibility, concentration, coordination, and economy of forces.

Machiavelli's (2014) analysis of power and his conception of *virtù*, strength, ability, and power under all circumstances, as well as foresight, have decisively influenced modern thinking about leadership, especially regarding the relationship between leadership and ethics. Machiavelli's thoughts find expression in numerous leadership guidebooks and military leadership documents. These include the principle of consistency of all leadership decisions and the demand for the establishment of rules of social interaction and the enforcement of these – if necessary with an iron fist (question of leadership *credibility*).

Clausewitz (1990) brings a rational understanding of leadership into play and particularly promotes strategic thinking. His differentiation of three different levels of leadership – strategic, operational, and tactical – is still important today. Clausewitz coins the idea of *purpose, ends, and means*. In doing so, he turns away from the widespread dogma of his time, according to which the conduct of a war and military units could be calculated down to the smallest detail using mathematical, quantitative calculations (Schössler 1991: 80–83). Rather, he calls for concentration on the actual purpose of action and the choice of the shortest route to achieving the goal, without applying generally valid, universal rules (Schössler 1991). Intuitive ability is what is required, a reasonable reflection on all situations (Schössler 1991: 91). Psychological aspects are thus given special importance. From this perspective, military leadership is less of a geometrically-mathematically structured planning of (combat) actions but rather a complex interplay of elements such as uncertainty, chance, creativity, intuition, courage, and talent (Clausewitz 1990, cf. in particular the section on the martial genius).

In modern armed forces, special emphasis lies on the formulation of *military leadership principles*. In practice, these are often merely normatively formulated principles of good conduct, i.e., they are less committed to theory and insight but are primarily oriented toward the practical concerns of controlling the behavior of soldiers. At present, such principles are frequently reduced to aspects of organizational theory, especially the idea of *increasing the efficiency* of organizations. Instead of a *people- and life-oriented* perspective of leadership, an *organisation-theoretical* view becomes predominant. Principles of correct or efficient management replace general principles of leadership. The reasons for this lie, on the one hand, in the increased need for legitimization of armed forces in peacetime and, on the other, in a general trend toward economization of social action. It is a characteristic of the armed forces in the late twentieth and early twenty-first centuries to willingly adopt

business management and organizational theory views on leadership. The military leader thus becomes a leader, manager, and administrator, but loses the classic profile of hero, father, and motivator.

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## **Military Leadership: Theoretical Approaches, Explanatory Models, and Empirical Findings**

In the social sciences, there are various theoretical efforts on the phenomenon of leadership (Neuberger 2002; Northouse 2007; Yukl 2010; Bass 2008; Bryman et al. 2011; Elbe 2015). These have entered the military sciences, too. In particular, the leadership research of recent decades, which originated in the Anglo-American world, has shaped the academic debate. The most important theoretical approaches and explanatory models are outlined below.

### **Personality-Based Theories**

Personalized approaches characterize almost all efforts at theory building. The strength and weakness of this approach lies in its primary focus on the leader (*Great Man Theory*), with particular attention paid to such factors as character, abilities, and personality.

The trait theory is based on a comparative analysis of different leadership personalities and their specific characteristics. It is necessary to identify those character traits that appear to be directly or indirectly decisive for leadership success (see Rosenstiel 2014). Empirical research tends to develop a catalogue of elementary (leadership) characteristics on the basis of such observations and comparisons (Neuberger 1976; Rosenstiel and Nerdinger 2011; Gebert and Rosenstiel 2002; Kernic 2021). Rosenstiel (2014: 7) provides the following catalogue (see Stogdill 1974; Northouse 2007: 18):

- (a) Ability (intelligence, vigilance, verbal dexterity, originality, and judgement)
- (b) Achievement (school performance, knowledge, and sporting achievement)
- (c) Accountability (reliability, initiative, perseverance, aggressiveness, self-confidence, and desire to excel)
- (d) Participation (activity, sociability, willingness to cooperate, adaptability, and humor)
- (e) Status (socioeconomic position and popularity)

On the other hand, there are studies that emphasize the following three characteristics (Manning and Curtis 2009: 16):

- (a) Intelligence
- (b) Clear and strong values
- (c) High personal driving force

The trait theory aims particularly at answering a central question of military leadership: Which are the characteristics troop leaders and commanders have to possess in order to achieve leadership success?

The skills theory considers certain learnable and developable (leadership) skills to be decisive for leadership success. As early as the 1950s, Katz (1955) developed a model according to which leaders are expected to have different levels of technical, social, and conceptual skills, depending on the level of leadership. The starting point is the assumption that nobody is born a leader, but that leadership skills can be learned, practiced, and improved. This view is widely accepted in the military today, although it is linked to the belief that people are unequally suited to leadership. The two central questions that this approach seeks to answer can be formulated as follows: What practical skills and techniques do military leaders need to lead successfully? And, how can these skills be taught?

Theoretical approaches to leadership personality are mainly based on assumptions and findings from personality psychology. The conception of the five dimensions of personality (Big 5 personality traits) and the relationship between personality and trust play a central role. According to the five assumed Big 5 personality traits, every person can be ranked on a scale with the following factors: neuroticism, extraversion, openness to experience, conscientiousness, and tolerance (or sociability) (Costa and McCrae 1992). It is often attested that successful leaders show a particularly high degree of conscientiousness (high sense of responsibility), make high demands on themselves (high work ethics), and exhibit a high degree of extroversion (McCrae and Costa 2003; Howard and Howard 2008). The military often refers to the need for charisma (*charismatic leadership*) in this context.

Max Weber's concept of *charismatic command* (Weber 1980) at the same time exposes a number of fundamental aspects and problems of military leadership: Firstly, by introducing this originally theological concept and defining charisma as "the exceptional sanctity or heroic qualities or exemplary character of a person, and of the orders that this person proclaims or creates (charismatic rule)" (Weber 1980: 342), he makes reference to always preexisting possibilities of a metaphysical and theological foundation of leadership/obedience, especially in terms of a fusion of religious and military spheres. In the context of his concept of command, he looks at aspects concerning legitimacy, on the one hand. On the other hand, Weber also includes purely empirical (factual, actual) evaluations of leadership by the followers or charismatically ruled without these value judgements being based on moral criteria or standards (Weber 1980: 374 ff.). This reveals the ambivalence of the type of charismatic leader: he or she may be good or evil, leader or seducer. Secondly, Weber's concept of charismatic leadership radically questions the modern, mechanical-instrumental understanding of leadership (especially the belief that human action can be controlled down to the smallest detail, i.e., that ultimately it is only a matter of choosing and using the right means of control) as well as ideas of bottom-up leadership (e.g., participatory leadership). Referring to charisma enables the drafting and the practical implementation of a metaphysical concept of top-down military leadership. Based on its divine metaphysical justification, this allows for the development of ways of thinking and acting in the military – right up to the

establishment of a radically conceived blind and unconditional obedience to the commander (in the sense of total devotion). Such thinking detaches itself from socially established ethical criteria and standards. At all military levels of leadership, the desire or will to impress one's own subordinate soldiers and followers as a field army or military leader often becomes dominant within the framework of such leadership action.

All in all, the military organization always faces a dual task (Elbe 2020; Kernic 2021). On the one hand, charismatic-dogmatic leadership has to be limited, i.e., leadership responsibility in an ethical sense has to be guaranteed and leadership processes have to be designed primarily according to rational-functional criteria. On the other hand, there is the need for convincing, inspiring, and motivating troop leaders in the military who, on the basis of their personal qualities and abilities, can produce loyalty among the soldiers under their command and thus make a significant contribution to military success (especially in combat situations).

## **Behavior-Oriented Theories (Leadership Styles)**

Leadership behavior theory is based on the observation that leaders develop (dominant) behavior patterns in their relationships with followers. At first glance, these patterns of behavior and action (leadership styles) appear to be independent of the situation. The term leadership style refers to a "regularly recurring pattern of leadership action that lasts over time and is inherently constant in relation to certain situations" (Staehle 1999: 334; Macharzina 2003). Military discourses on leadership styles are often based on a one- or two-dimensional leadership style model.

The best-known one-dimensional model was developed by Kurt Lewin, who in his typology of basic attitudes first made a fundamental distinction between authoritarian or democratic leadership behavior and the absence of leadership – what had been labeled a *laissez-faire* group atmosphere (Lewin 1951; Lewin et al. 1939). The *laissez-faire* group atmosphere allows the greatest freedom for the group members (i.e., not to lead, to let things simply run their course). In terms of the active leadership attitudes, the authoritarian style of leadership allowed no contradiction, and decisions are made by one leader alone. This contrasts with the democratic style of leadership in which a cooperative relationship is created (objective discourse, participation, and dialogue) and decisions are made together. In two extensive experiments, clubs of 10-year-old boys were exposed to both leadership styles (authoritarian vs. democratic) and all three group atmospheres (authoritarian, democratic, and *laissez-faire*). The main results determined were that, firstly, democratic climates were considered most pleasant, and secondly, that aggression and hostility in autocratic groups was generally more frequent. Hostility and aggression especially occurred when there was a transition from autocratic to a freer social climate. Group conflicts were promoted by three factors: the presence of hostile persons who were not group members, the absence of a group leader, or the lack of group activity (Lewin et al. 1939).

From the group of two- and three-dimensional models, the *Managerial Grid* developed by Robert Blake and Jane Mouton (1994) in the 1960s has become particularly well known. It allows a further differentiation of leadership styles and is still used in military leadership training today. However, all models suffer from the shortcoming that there is no empirical evidence for the assumption of a single correct leadership style whose application would automatically guarantee successful leadership. The choice of the correct or appropriate management style ultimately always depends on the respective situation and the concrete circumstances. Another model that has received particular attention in the recent past is that of transformational leadership. This concept highlights the transformational power of the leader through factors such as optimism, charisma, intelligence, etc. (Burns 1978). Bass (1985) and Bass and Avolio (1990) subsequently expanded and refined the concept of transactional/transformational leadership, whereby the possibilities for change in leadership were based on the following four factors: (a) good practice, charisma, and credibility (idealized influence), (b) inspirational motivation, (c) intellectual stimulation, and (d) individualized consideration.

## Situational Theories

Situational theories and situational leadership models emerged as a reaction to the unsatisfactory explanatory power of all person and behavior-related approaches. Instead of the leader, the leadership situation became the object of investigation. The following question became the guiding principle: Which concrete situational factors determine whether or not a leader is successful in a certain situation? The socioscientific claim of these theoretical approaches is to identify the most important parameters or influencing factors for the respective leadership situations (and, wherever possible, to make them measurable). The basic idea is to find out which *mixture of factors* produces best results, i.e., ensures leadership success.

In the basic pattern of situational leadership, situation- and person-related influencing factors (variables) are combined, which are subject to permanent change (“dynamic model”). The group of situational factors, generally regarded as important, includes (cf. Manning and Curtis 2009: 43 f.) the size of the organization, the social and psychological climate, working conditions, and the type, location, and purpose of the work. In German-speaking leadership papers, the following factors are often used for analysis: personality of the leader, employees, organization, environment, and leadership behavior.

## Current Theoretical Approaches

At this point a variety of current theoretical approaches could be listed, e.g., with reference to neurosciences, systems theory, cybernetics, constructivism, and gender (Bryman et al. 2011; Nohria and Khurana 2010; Elbe 2015). Such a project has, so far, not been considered because these approaches have hardly been applied to the



field of military leadership. Overall, one can speak of a coexistence of the most diverse leadership theories, without one of them having succeeded in asserting itself as the dominant theory or meta-theory over the others nor having succeeded in becoming generally accepted in science. Therefore, only two approaches shall be briefly examined: the systemic and the constructivist approach.

Since the late 1960s, concepts and notions developed by system theory (system, environment, autopoiesis, communication, observation, etc.) have found their way into leadership research. From a systemic perspective, leadership situations are a dynamic social reality of enormous complexity that must be made manageable. This can and should be achieved by identifying the relationships that are effective in it (cause-effect, means to an end, etc.). Decisive guiding differences in systemic theory formation are in particular the distinctions between the partial and the whole, the system versus the environment, and the identity difference. Such system-borne distinctions cause demarcations and establish an order of things simultaneously, although this is subject to constant fluctuations. The person-oriented (or behavior-oriented) perspective is replaced by a focus on the dynamics of interaction and communication.

Constructivist theories see leadership practice in social reality and life as constructed. The focus is on construction elements and processes of a socially constructed reality that can be shaped and socially influenced or even changed. At the same time, this theoretical approach takes leave of the claim to be able to make unambiguous predictions. Thus, there are no ready-made recipes for successful leadership. Rather, it is a matter of precisely describing and understanding complex relationships in their respective effects and influences (social constructions).

## Overview of Empirical Findings

A systematic review of the large amount of literature on military leadership quickly leads to the insight that the vast majority of books, studies, and articles can be assigned to two main categories: The first grouping includes personal, mostly historical-biographical depictions of military leaders. In contrast, the literature in the second category focuses on concrete (contemporary) historical leadership situations, i.e., on the interaction of individuals in specific situations and in a very specific sociocultural context (often designed as empirical case studies). Both categories are characterized by descriptive-analytical research methods based on historical documents, testimonies, and personal experiences. There are also many publications by former commanders who, after a military mission, present their personal reflections and analyses to the world – mostly in the sense of lessons learned or as recommendations and guidelines for future generations of leaders, both inside and outside the military (for example: Montgomery 1961; Smith 2002; Kiyosaki 2015; Kernic 2021).

Numerous surveys on military leadership largely dispense with a systematic processing of empirical findings. Instead, they endeavor to make normative statements on leadership in a military context, especially with regard to the triangle of



(a) leaders, (b) leadership actions and processes, and (c) general principles of military leadership (motivation, cohesion, discipline, values, culture, trust, etc.) (Taylor and Rosenbach 2005; Horn and Walker 2008). A first comprehensive evaluation of the empirical findings of military leadership research and military sociology of the postwar period was carried out in the mid-1980s by Van Fleet and Yukl (1986). This showed that empirical social research on military leadership is characterized by the effort to test empirically individual leadership theories in specific military fields of action and to make new psychological research approaches (e.g., leadership under stress) useful for research as well as for military service. In recent times, for example, the concept of empirically based leadership (McDonald 2013) combines psychological aspects with personality-specific characteristics of effective leadership and context-related factors. The importance of the interplay of intelligence (cognitive and emotional) and ethics/values for leadership performance is emphasized (ibid.).

At the beginning of the 2000s, interesting empirical findings were produced by studies on the importance of trust in everyday military leadership. Vadell (2008) provided evidence of a close connection between trust and commitment in the course of his studies on the US Air Force: “Junior officers with a stronger sense of duty and an obligation to the Air Force are less likely to leave the Air Force after their commitment. (...) With an increase of trust in leadership fewer junior officers leave the Air Force” (ibid.: 107). In the German-speaking world, there is a lack of socioempirical findings on the sociopsychological significance of the factor trust in the context of everyday military leadership. One exception is Mackewitsch’s survey (2001), which aimed to determine the trust German soldiers place in their superiors in the Kosovo mission and to ascertain how their leadership behavior is perceived.

The importance of soft skills or human skills for efficient, successful leadership has been repeatedly confirmed for years by empirical findings from *command and control (C2) research*. Various studies point to a clear primacy of human factors (personality and abilities of the commander, flexibility, and potential for change management) over technical and procedural factors with regard to military leadership success (Creveld 1985; Pigeau and McCann 2002; Sharpe and English 2002; Kernic 2021). In the context of military stabilization missions, the case studies presented by Fieder (2011) recently provided empirical evidence for the following attributes of military leadership success: unity of forces, focus on strategic vision, inspiration and flexibility, authority and relationships, as well as planning and training (ibid.: 56).

Anglo-American leadership research – both in general and in relation to the military – has been intensively received in the German-speaking world since the 1970s. Various studies have taken up the various leadership theory approaches and tested their applicability to concrete leadership situations (e.g., Lippert and Schneider 1977). Two large-scale empirical surveys have dealt with the activities of leaders in the German Bundeswehr and the image of company commanders and noncommissioned officers as leaders, educators, and instructors of their soldiers. The activity analysis of the Company Commander Study (Kuhlmann 1979) showed that relatively little time is actually spent on the actual leadership activities within a

company. With regard to the oral communication of the officer and company commander as the leader of his soldiers, the study diagnosed a significant social distance between the leader and the commanded. This was shown, among other things, by the fact that in over 90% of the interaction time in everyday military life there was no direct contact. Therefore, only nonverbal interaction between the unit leader and his soldiers was possible (ibid.: 189–193), at best. This finding was confirmed again some 20 years later, with more recent studies focusing primarily on the specific habitus and professional ethos of officers. Elbe (2004), who defines officers as the sectoral elite of the military (ibid.: 420), referred to this distance between the officer and his crew (his soldiers), which in his opinion is not only due to the dispositive activity of the officer, but must rather be seen as a part of an elitist attitude. A structural consequence of this social distance for military leadership in everyday life is obvious: “The officer is therefore dependent on the implementation and mediation performance of non-commissioned officers, who in turn develop their typical attitude” (ibid.).

The broadly based *Group Leader Study* (“Unterführer-Studie”) of the Social Science Institute of the German Bundeswehr (Dillkofer and Klein 1979; Dillkofer and Klein 1981) produced interesting results regarding the self-perception and perception by others of the noncommissioned officers of the German Bundeswehr in terms of their activity as human leaders: “In all ranks and all branches of the armed forces there is a clear preference for a cooperative style of leadership. The members of the Air Force are particularly in favour of it, those of the Army less so. This branch of the armed forces is the only one with a not inconsiderable number of non-commissioned officers who consider a leadership style based strictly on command and obedience to be optimal” (Dillkofer and Klein 1981: 96).

While in the late 1980s the aspect of military leadership in small combat communities (Lippert 1985) met with particular interest within military sociology, research of the last two decades has concentrated particularly on aspects of military career progression. Elbe and Prondzinski (2002: 110 f.) showed that an above-average number of officers succeeded in advancing to leading positions in their later professional lives outside the German Bundeswehr. According to Elbe in his conclusion, the “decisive factor for the first employment after military service” was “the combination of academic qualifications and (military) leadership experience” (Elbe 2004: 427). All empirical findings with regard to career progression – also over the 20-year time axis – confirm that leadership experience in the military proves to be advantageous and useful for a later career and leadership activities in the civilian environment (Elbe 2018). An empirical study from Switzerland came to a similar conclusion and emphasized the strengths attributed to military cadre training, such as “ability to work under pressure, assertiveness, self-discipline and the ability to quickly assess the situation and make decisions,” while on the other hand, “the benefit of military cadre training for the development of social competence” was considered relatively low (Schmid et al. 2007).

More recently, questions concerning the relationship between leadership style and leadership success have experienced a renaissance within the military context. In this respect, multinational operations and close cooperation between members of armed

forces of different nations and between civilian and military personnel in multinational headquarters offer an ideal field of investigation for empirical surveys on questions of leadership culture (Hagen 2006; Casas Santero and Sánchez Navarro 2008; Richter 2018b). In 2014, a broad empirical study examined the preferred leadership styles and the general leadership culture in Supreme Headquarters Allied Powers Europe (SHAPE) (Richter 2018a). The data clearly show that the participatory management style is generally preferred and that a clear majority of the respondents favor a management style that encourages the involvement of subordinates in decision-making processes. At the same time, the results of the study provided two interesting insights: First, a very similar attitude preference with regard to preferred leadership style was found across all levels of leadership and groups of people, regardless of national origin or status as a civilian or military person. Second, data analysis suggests that the leadership style itself does not have a significant impact on aspects such as organizational commitment or mission clarity (ibid.).

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## Leadership Concepts in Modern Armed Forces

In modern times, the emergence of mass armies has drawn increased attention to central aspects of military leadership, organizational control, and modern management. The enormous armies undoubtedly bore strong similarities to modern factories and enterprises aimed at the mass production of goods and commodities. Compared to these companies, the special feature of the military is its orientation toward a “management of military force” (Lasswell 1941). Early management theory (scientific management) and military leadership theory are therefore closely interwoven. With increasing democratization, however, they gradually began to fall apart. Democratization processes led to a new definition of civil-military relations based on the primacy of politics and public and parliamentary control of military force.

The social, political, and economic upheavals of modern times have changed the leadership concepts of the armed forces in democratic pluralistic states. New concepts have found their way into the military, for example, in the area of personnel management. The concept of personnel management makes reference to everyday work and the understanding of such work in modern society, especially to the places and processes of product production. From this perspective, military leadership becomes a means of influencing the social driving factors of people’s work performance. Military forces appear as companies that are responsible for the production of a range of products (e.g., security) and the provision of certain services. Military management becomes corporate management, which involves guiding principles and concepts of personnel management for the military organization and for military operation (Kernic 2021).

The introduction of an entrepreneurial perspective on leadership leads to a division of leadership tasks in the military: on the one hand, personnel management or personnel administration; on the other hand, corporate management in the sense of actively shaping the structures and processes in the “military” enterprise. And

suddenly there is talk of employee motivation and satisfaction or a binding definition of performance targets for soldiers.

What are the contents and basic convictions behind the management concepts of the armed forces in democratic, pluralistic societies? A study of current leadership documents of the armed forces reveals a picture of the military leader who is faced with a wide range of hybrid challenges. He appears both as a recipient of orders and as an independently thinking and acting commander; he is a fighter and peacekeeper; he is a leader and manager; he is demanding and encouraging. What is striking is the constant emphasis on his leadership activity based on ethical values, on the basis of ethics and law.

In the US Army, for example, various Army Regulations (Field Manuals) regulate aspects of military leadership. Leadership is defined here as “influencing people by providing purpose, direction, and motivation, while operating to accomplish the mission and improve the organisation” (US Army 2007). The framework for military leadership in the US Army model is determined by a specific military culture (army culture), which is based on the following cornerstones: ethics, values, standards, war ethics, and principles/imperatives.

According to Army Regulation 600–100, the Army develops “competent and multifaceted military and civilian leaders who personify the Army values and the warrior ethos in all aspects from warfighting, to statesmanship, to enterprise management. The Army develops qualities in its leaders to enable them to respond effectively to what they will face.” [ibid.]

In the German-speaking world, current discussions seek to integrate military leadership in the democratic constitutional state with its fundamental values. Since its emergence, the concept of *Innere Führung* (*Civic Education and Leadership*) in Germany can be seen as an expression of such a need to merge democratic principles under the rule of law with the ideas and practices of military leadership. Generally, Civic Education and Leadership “ensures that Bundeswehr soldiers are part of society and obliges the armed forces to uphold law and military order. It shapes the leadership culture of the Bundeswehr” (BMVg 2008). The regulation itself, now known as the Central Manual on *Civic Education and Leadership, Self-Conception, and Leadership Culture A-2600/1* (BMVg 2017), goes one step further and declares intrinsic leadership to be the general norm of conduct for soldiers of the Bundeswehr: “Civic Education and Leadership is the obligatory basis for our own actions in day-to-day activity as well as in operations, in national and multinational structures. All soldiers must align their behaviour and actions with the principles of Civic Education and Leadership. This is an important element of the Bundeswehr’s leadership culture” (BMVg 2017: paragraph 501).

This leadership culture was put to the test in a representative research in the German Armed Forces by Richter (2020). He shows that the majority of the soldiers are satisfied with their direct superior. However, superiors in the German Armed Forces should develop more leadership sensitivity in some areas, namely show more critical self-assessment, live their role model more strongly toward subordinates, convey more confidence, and express more criticism and praise, i.e., give more feedback. In addition to the individual management-led interaction level, the

leadership culture at the organizational level is of central importance for a healthy organization. Still there is potential for further development of the Civic Education and Leadership Conception to further improve the soldiers' satisfaction with their superiors' leadership performance.

In Switzerland in the 1990s, it was mainly Rudolf Steiger (of the Military Academy at ETH Zurich) who provided suggestions for military leaders on how they should behave in their capacity as leaders in everyday situations. He describes his leadership philosophy with the concept of people-oriented leadership, which he sees as a basic attitude "in which people play a key role in thinking, feeling – and hopefully also in acting!" (Steiger 2004: 17). "By people-oriented leadership we understand," Steiger says, "that the actions and behaviour of everyone involved in a task are focused on the goals that have been set or agreed upon, whereby the employee as a human being plays an important role". (ibid.: 17 f.).

The model of the Austrian armed forces (Theresian leadership model) is based on an image of man "which is characterised by personal responsibility, trust and the will to shape things" (Königshofer 2015: 12). Leadership action is understood "as responsible, goal-oriented action that is controlled by decisions, both at the level of military leadership and at the level of the person led (decision to co-responsible obedience)" (ibid.). Leadership competencies are regarded as the ability "to act creatively and self-organised in unexpected, open-ended leadership situations" (ibid.: 47).

Military leadership training today largely takes these models and concepts into account. This promotes a new image of the officer, which pushes the trainer and human leader (instructor, motivator, initiator, and helper) to center stage, but without eliminating the image of the fighter (warrior) completely. At the same time, civilian leadership and management concepts are increasingly finding their way into the military: military leaders are often sent to civilian universities and educational institutions in order to learn new leadership insights and integrate them into the military. At the same time, the opening up of access for women to military service has marked the beginning of a gradual, albeit hesitant, erosion process of a dominant masculinity orientation with regard to leadership in the military (Kernic 2021).

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## Summary and Perspectives

Leadership in general extends to a multitude of different fields of social interaction and influence (Manning and Curtis 2009: 12). Military leadership can be defined as the systematically planned, intentional control of actions of armed forces in their entirety (including all branches of the armed forces, troop units, etc.) and influence on the people acting in these organizations, which aims to achieve certain (organizational) goals through a coordinated effort. These goals can be achieved, but they can also be missed. Successful military leadership is said to be achieved when the specified goals are actually achieved (leadership success, effective leadership). Countless examples from history show that military leadership can fail miserably. Due to the violent potential of the armed forces, such failure can have catastrophic

consequences that are by no means limited to the military sphere. This leads to the necessity of a careful selection of leaders as well as systematic, extensive leadership training in the military organization.

Today, the conviction prevails that every person is generally capable of exercising certain leadership activities, i.e., being a leader. However, the view is held that certain people are better suited than others. At the same time, empirical research clearly shows that people who seem to be born to lead have no guarantee of success in certain situations and in various constellations. Their actions may be crowned with success in practice in one instance, but not in another. The lack of a generally accepted, comprehensive social science theory of military leadership often inspires military leaders to view leadership as a form of art (Grint 2000) rather than science. Of course, empirical research findings and abstract leadership theories cannot simply be translated one to one into practical instructions for action but as for instance Richter (2020) has shown, it is the organization's leadership culture that fosters the soldiers' satisfaction with their superiors' leadership performance. However, they can help us to understand better leadership situations and advance our reflection on human action and social interaction – and thus open up new ways of thinking and new scope for action.

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# Military Leadership and Ethics

Peter Olsthoorn

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## Abstract

Leadership and ethics are habitually treated as related to separate spheres. It would be better, perhaps, if leadership and ethics were treated as belonging to a single domain. Ethics is an aspect of leadership and not a separate approach that exists alongside other approaches to leadership such as the trait approach, the situational approach, etc. This holds especially true for the military, one of the few organizations that can legitimately use violence. Today, most militaries opt for a character-based approach for the ethics education of their leaders and espouse leadership theories that want leaders to be strong and visionary. Both the role of character and leadership are increasingly questioned, however, on the basis that situational factors are more influential than leadership and character. A closer look suggests that an interactionist perspective, with leadership, character, and the situation interplaying, is more accurate. It is still good leadership that keeps soldiers from crossing the line between the lawful use of force and excessive violence.

## Keywords

Leadership · Ethics · Virtues · Character · Education

P. Olsthoorn (✉)  
Netherlands Defence Academy, Breda, The Netherlands

## Introduction

Incidents involving military personnel testify to the importance of ethics in the military. The killing of 39 civilians by Australian special forces in Afghanistan between 2005 and 2016 is a recent example of such an incident (Inspector-General of the ADF 2020), while the Abu Ghraib prison scandal, the Haditha killings, and the My Lai massacre already date some time back. Failing leadership played an important role in these examples (Inspector-General of the ADF 2020; Zimbardo 2007; Bargewell 2007; McDermott and Hart 2017), in the case of Abu Ghraib especially at the senior level (more on that below). In all these cases, the victims were outsiders to the organization. But militaries also have to deal with serious misbehavior *among* military personnel in units that are not deployed and in that part of the military organization that is never directly involved in combat. Also in such cases of misbehavior in the so-called cold organization (Soeters et al. 2003), military leaders are sometimes part of the problem. But peacetime incidents notwithstanding, it is because the military is one of the rare organizations that can legitimately use violence and that its leaders hence have to lead personnel that have used or experienced violence, which explains why leadership is so important in the military. There is a rapidly growing body of literature on military ethics, military leadership, and the ethics of military leadership that wants to contribute to a better understanding of the ethical challenges for military leaders but that also wishes to help the military leaders that actually face those challenges. (Military ethics “exists to be of service to professionals who are not themselves specialists in ethics but who have to carry out the tasks entrusted to the profession as honorably and correctly as possible. It is analogous to medical ethics or legal ethics in the sense that its core function is to assist those professions to think through the moral challenges and dilemmas inherent in their professional activity (...) papers in which philosophers argue with the positions of other philosophers, no matter how interesting they may be by the canons of the discipline, are not really military ethics in our sense” (Cook and Syse 2010).)

Although most handbooks on leadership written by leadership scholars do nowadays pay at least some attention to ethics, this will generally be in a separate chapter, often one of the last (see, for instance, Northouse 2021). Leadership and ethics are habitually treated as related to separate domains. (Interestingly, this thinking and writing about ethical leadership as just one approach among many other appears to be a relatively recent invention. Authors of old dealt with leadership and ethics as a single subject. It was not before the twentieth century that we saw the rise of a separate leadership industry (Kellerman 2012).) In real life ethics is, in the military and elsewhere, an important aspect of leadership and not a separate approach that exists alongside other approaches such as the trait approach, the situational approach, etc. Now, the last few decades did bring a number of leadership theories that profess to be ethical, such as transformational, authentic, spiritual, and servant leadership. It remains somewhat elusive, however, what exactly the ethical element of these theories consists of. Paying lip service to the importance of values does not make these modern leadership theories more ethical. According to leadership ethicist Joanne B. Ciulla:

philosophers who specialize in ethics see their subject differently than do social scientists. Studies of charismatic, transformational, and visionary leadership often talk about ethics. In these studies, ethics is part of the social scientist's description of types or qualities of leaders and/or leader behaviors. From a philosopher's point of view, these studies offer useful empirical descriptions, but they do not offer detailed critical analysis of the ethics of leadership. (2004, 303–4).

The argument for leading ethically that underlies transformational leadership (the leading theory today and popular among leadership scholars interested in the military; see, for instance, Bass 1996; Dvir et al. 2002) is that leaders who appeal to the values of their followers are thought to be more effective and to have followers who are more satisfied with their leader, than leaders who fail to do so (while unethical leadership is explained away as a pseudo-transformational leadership; see, for instance, Bass 1999). Such reasoning has not necessarily a lot to do with leadership that is actually ethical (see for a different view Bass and Steidlmeier 1999). The flip side of such arguments for leading ethically is that they lose their force as soon as a leader finds a way to be more effective, and perhaps even to have more satisfied followers, without being ethical. Even so, the importance of ethics is regularly “sold” to military personnel by pointing out that behaving ethically in the end benefits the organization or furthers the accomplishment of mission goals. (Interestingly, also some outside the military have a tendency to convince militaries of the importance of ethical conduct by invoking arguments that are more based on expediency than morality. For instance, Human Rights Watch reported that civilian fatalities in Afghanistan increased support for the Taliban and that taking “tactical measures to reduce civilian deaths” was essential for maintaining the support of the local population that the mission in Afghanistan depended on (2008, 5)).

Different from what most leadership handbooks do, the next section turns to ethics first. The subsequent section describes some criticisms at the dominant ethical approach to military leadership education, while the section after that takes a closer look at leadership theory.

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## Military Ethics Education

Many in the military see their work as a profession, something that military sociologist James Burk defines as “a relatively ‘high status’ occupation whose members apply abstract knowledge to solve problems in a particular field of endeavor” (2002, 21). Clearly, to label an occupation as a profession is “to make a positive normative judgment about the work being done” (Burk 2002, 19), and professions hence compete “to secure their place in society” (Burk 2002, 23). In a more neutral sense, the term professionalization refers to the conduct, objectives, and values that typify a profession. What distinguishes a profession from other occupations that require a fair amount of skill and training is that a professional often “works relatively independently of his colleagues, but closely with the clients he serves” (Mintzberg 1983, 190). As a result professionals frequently seem to be as loyal to

their profession as they are to their organization and colleagues (Mintzberg 1983). It is that element of professionalism that seems to be less present in the military. That is perhaps at least partly due to the fact that, while professionals such as doctors and lawyers receive most of their socialization before entering their job (Mintzberg 1983, 192), military leaders tend to receive most of their education within the military, adding to the loyalty they often feel toward each other and their own organization. This also means that the professional standards of those who lead the military do not so much stem from universities and professional associations as they do from their military organization. As a consequence, some countries have military codes, oaths, and values that are primarily about military effectiveness and the needs and interests of the organization and colleagues, while the values of the medical professionals, for instance, are not about how to behave toward colleagues but about patients and medical care. A related consequence is that different militaries have different organizational values (often still service specific), but there are no values of the military profession as such. Despite that relative lack of shared values of the military profession, most authors today agree that the military profession is, indeed, a profession (see also Burk 2002).

Some general remarks can be made about the form this in-house professional ethics education for military leaders can take. First of all, that education can either be functional, aimed at making military leaders better at their job, or aspirational, aimed at turning them into more ethical persons (Wolfendale 2008; see also Robinson 2007). (Underlying is the more fundamental question whether there is a difference between (mainly functional) role morality and (more aspirational) general morality. Sometimes, this is clearly the case: a lawyer might be expected to defend the guilty, spies must now and then lie, and at times role morality will ask you to do more than is expected of ordinary civilians (Coleman 2013).) In general, the aspirational approach focuses on *character*, while the functional approach is more based on *conduct* and *outcomes*. (One could also argue, however, that by aiming to instill both “general” virtues, such as integrity and honesty, and more military specific virtues, such as courage and discipline, the military in fact combines an aspirational and a functional approach.) This corresponds with three main schools in moral philosophy, respectively, *virtue ethics*, *rule-based ethics*, and *utilitarianism*. These three schools form also the three most likely foundations for the ethics education of military leaders.

Rule-based ethics underline the importance of universal, categorically binding moral norms. Most militaries tend to see moral issues through the lens of rules and regulations, and setting rules makes clear to military personnel what they can and cannot do. Some decisions are not left to the discretion of the individual soldier. (That individual soldier does not always want discretionary room: David Whetham describes how in recent missions soldiers from Australia, Great Britain, Canada, and the United States who were confronted with child abuse and corruption “. . . kept asking for guidance when faced with situations that they knew ‘just weren’t right’” (2017, 98). They did not get that guidance. But when political and military leaders fail to provide guidelines on how to act in such situations, responsibility shifts to the men and women on the ground.) This is not only in the interest of outsiders to the

organization but also that of soldiers themselves: research shows that military personnel who lack such rules experience more moral dilemmas, increasing the likelihood of moral injury (Schut 2015). The downside of such rule-based approaches is that rules tend to be inflexible, also when that flexibility is clearly called for. Rule-following can also hamper the ability to see the moral aspect of what one is doing, even though that ability is essential to morally sound decision-making. A text book on military ethics meant for educating future military leaders hence states that “in any situation where law and ethics set different standards, a member of the military profession will follow the higher standard, inevitably the one required by ethics” (Coleman 2013, 268). Soldiers will often have substantial leeway in their decision-making. This is one of the reasons why many militaries see promoting virtues as an important complement to rules imposed from above. Virtues, in this view, have to provide guidance to military personnel in morally ambiguous situations, seeing that providing general rules and guidelines for such complex situations will not work – militaries seem now and then even disinclined to give them (see, for instance, Whetham 2017).

Now, first of all, virtues have to be distinguished from values, even if militaries occasionally treat them as if they were the same. Where values correspond to “the ideals that the community cherishes, such as freedom,” virtues represent “desirable characteristics of individuals, such as courage” (Robinson 2007, 32). Virtues have also been described as stable character traits that are worth having, often working as correctives to our self-regarding inclinations (Foot 2002, 8–12). Virtue ethics assumes that such character traits can be developed through training and practice. Performing courageous deeds grows courage, in this view. Where duty-based ethics focuses on the act, that is, on what is wrong, right, permitted, or obligatory, the emphasis in virtue ethics is on terms that describe the actor, such as good and praiseworthy. Motives and emotions are important in virtue ethics, something allegedly overlooked by other schools in moral philosophy. This focus on the kind of person one wants to be makes that it has a much broader range than duty-based ethics. Being friendly, for instance, is a virtue, but it is not a duty (van Hoof 2014). That until recently most modern moral philosophy paid less attention to such things as emotions, character formation, and personality does not mean that there is anything radically new about an approach that centers on virtues, though. Such an approach harks back to Aristotle whose work underlies most ethics education based on military virtues nowadays. As Robinson writes, “[t]he approach adopted in most armed forces is that of ‘virtue ethics,’ with their philosophical origins found in Aristotle. Essentially, virtue ethics seeks to ensure moral behavior by instilling certain virtues (loyalty, honesty, and courage) to create good character. Consequently, many military academies have adopted an approach based on Aristotelian virtue ethics” (Robinson 2007, 29). Such an approach appeals to many military trainers and educators because it sits well with the way most militaries see themselves: as being in the business of character-building, especially that of its (future) leaders. Where rule-based approaches mainly aim at securing compliance, virtue ethics asks for a lot more. Virtue ethics is hence in keeping with the tendency of many Western militaries to move toward a aspirational approach that aims at making

soldiers better persons, mainly based on the view that bad persons are not likely to form morally good soldiers (Robinson 2007; Wolfendale 2008, 164) – although they could still be effective ones.

On a more critical note, one could argue that many militaries have adopted this aspirational virtue ethics approach in a rather carefree manner. There are quite a few unanswered questions. For instance, how do we teach virtues? It is an assumption of virtue ethics that they can be taught, but is this really the case? And if so, how should they be taught? Virtues are developed by practicing them, but military ethics education consists often of formal education in a classroom setting that leaves little room for that. In practice ethics education based on virtue ethics might consist of teaching about virtues (and virtue ethics) rather than teaching virtues. Also, it is often overlooked that the different virtues are interrelated: courage is of little use without practical wisdom to guide it, for instance, while that same courage is not a virtue if it does not serve a just goal. Finally, we should keep in mind that the aim of virtue ethics is one's own flourishing and that it is thus not by itself attentive to the needs of others (with the virtue of justice as the obvious exception). That militaries promote virtues with an eye to external goals such as military effectiveness or ensuring the ethical use of force even raises the question to what extent it is virtue ethics that is practiced here. Promoting certain virtues because they are beneficial to others within or outside one's own organization amounts to what is sometimes described as character utilitarianism (Railton 1988).

That brings us to utilitarianism, a universalistic ethic that holds that whether an individual act, or category of acts (in the case of rule utilitarianism), is morally right depends upon the results it produces but also (much more revolutionary) that everyone's life and happiness should weigh equally. Next to rules and virtues, utilitarianism is in theory a possible third candidate to buttress military ethics education. In practice most authors on military ethics see it as particularly unfit for that purpose, mostly because it would make military expedience outweigh all other concerns: "an outcome-centered approach may lead all too easily to military expedience as the sole guide to actions in war" (Bonadonna 1994, 18). Utilitarianism's fairly bad reputation in military ethics is hence mainly because it is thought to make military expedience override all other concerns. Military ethicist and political philosopher Michael Walzer has pointed out, as have many others, that the valuing of "each and every person" in the same way will not happen when "solidarity collapses" (Walzer 2004, 39). Precisely that is what happens in war, where we cannot but expect to see little willingness to take the consequences to all parties into account equally. The atomic bombing of Hiroshima and Nagasaki is a famous instance of such a skewed utilitarian calculation that "the rules of war and the rights they are designed to protect" should have stopped (Walzer 1992: 263–8). Most of utilitarianism's critics reason that utilitarianism is not bad per se, but prone to be misapplied in a self-serving way.

Such criticisms, William H. Shaw (Shaw 2016) argues in his defense of utilitarian thinking about the moral issues that war occasions, are mistaken, as are most of the other common objections to utilitarian thinking about the moral issues war raises. Utilitarianism does not condone the maximizing of our own utility, as some critics

seem to hold, but that of all. Not unlike J.S. Mill and H. Sidgwick, Shaw advocates a fairly subtle variety of utilitarianism that does not expect us to make elaborate utilitarian calculations before every action; rather, it wants us to act from motives, dispositions, and character traits that have proven to produce the best results on the long term (2016, 31). The same holds true for some general rules, such as keeping promises and telling the truth. Likewise, accepting and institutionalizing a specific set of rights have beneficial consequences. We must therefore adopt these rights (2016, 36) and not violate them if we think that would increase general happiness in a specific instance. Interestingly, Shaw holds that states not only *should* adhere to certain rules and rights; in practice, Shaw suggests that the wish to maximize welfare (or minimize suffering) is also why states and militaries *do* follow these principles in practice. Shaw stresses that one does not have to be convinced of utilitarianism as a moral philosophy to accept that it does have the best answers regarding questions about when and how wars are to be fought.

An alternative to the usual virtue ethics, rule-based ethics, and utilitarianism trichotomy forms the idea of a value-based ethics education for military personnel. Such an approach would put the values and principles of that community to the foreground, instead of promoting the military-specific virtues that are currently taught. An example of such a value-based approach is the concept of *Innere Führung* as used by the German armed forces. A leading idea behind *Innere Führung* is that soldiers should think for themselves, but the values that should guide that independent thinking are societal. Members of the German military are to actively defend, out of personal conviction, values such as human dignity, freedom, justice, equality, and democracy.

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## Does Character Matter?

Most militaries see a virtue ethics approach as the best way to underpin the ethics education of its leaders. An increasing number of authors suspect, however, that situations determine conduct to a far greater extent than character does. Notwithstanding the merits of a virtue-based moral education, the situation military personnel find themselves in can limit the influence of a virtuous disposition, especially when that disposition is needed the most. This idea goes under the name of situationism. It points out that people tend to make a fundamental attribution error: the tendency to over-attribute behavior to character or personality and underrate the influence of situational factors.

When we say that people have character, we generally mean that they have traits that influence behavior across different situations (cross-situational consistency) and are constant over time (temporal stability). Sometimes, we also mean that these traits are interrelated (integrity). Situationists especially take issue with the belief that we have traits that are cross-situationally stable. They argue that this insight challenges virtue ethics and that trying to build character in order to make people behave morally is betting on the wrong horse. This is a variation on the old insight that knowing good and doing good are not the same (Arjoon 2008, 235). Especially



Milgram's research on obedience and Zimbardo's Stanford Prison Experiment have popularized (also in the military) the idea that situations can make people harm innocent others. Zimbardo's colleague Albert Bandura has argued that people with high ethical standards can behave unethically because they find ways to justify their behavior and as a result are able to avoid feelings of guilt or shame that would normally follow not living up to one's ethical standards (that, according to Bandura, do not necessarily erode). According to Bandura, "there are many social and psychological manoeuvres by which moral self-sanctions can be disengaged from inhumane conduct" (Bandura 1999: 194). Such maneuvers include moral justification (it is for a good cause), advantageous comparison (the other side behaves worse), the displacement and diffusion of responsibility (basically the problem of the many hands – something that has gotten a new relevance with the emergence of network-centric warfare), the dehumanization of enemy forces during wartime, and the use of euphemisms such as "collateral damage" and "servicing the target."

Ethicists increasingly take such insights about how situations matter into account. Some claim that modern social psychology research not only undermines virtue ethics but also some widely shared intuitions about moral responsibility (see, for instance, Doris and Murphy 2007; Robinson 2009). It certainly challenges some notions about the role of military leaders and about how to prepare these leaders for their role. Concentrating on virtues implies a focus on the individual, and according to situationists, such an approach wrongly suggests that incidents involving military personnel are the result of individual moral defects and that soldiers bear moral responsibility when things go wrong. Situationists think that this blaming of individual soldiers is mostly incorrect. The situational factors that already swayed most research subjects in the experiments of Milgram and Zimbardo amount to little in comparison to the situational forces soldiers encounter in combat. Sleep deprivation, dehumanization, stress, military training and culture, (racial) ideology, the role of the primary group, and negative peer pressure, but also the amount and kind of training and education received, make unethical behavior almost inevitable (Doris and Murphy 2007). The strong loyalty to colleagues and the organization that militaries further certainly plays a role here too. Military ethicist Stephen Coleman argues that some of the moral dilemmas military personnel face are not really dilemmas, but tests of integrity: what is the right thing to do is clear, yet there is considerable situational pressure (from colleagues, for instance) to choose the wrong course of action (Coleman 2009, 105–6). As Doris and Murphy put it, "[i]f situational pressures of the sort adduced in the experimental record can impair the exercise of normative competence, we can reasonably conclude that the extreme and often prolonged situational pressures typical of warfare can induce quite severe impairments in normative competence" (Doris and Murphy 2007).

That the situation often governs our conduct does not necessarily mean that virtue ethics is unfit as a basis for moral education. Social psychology only shows that the influence of our natural dispositions is weak. That does not tell us a lot about the influence of virtues, which are the product of training and habituation. Virtue ethics does not assume that most people have virtues but that people can acquire them if they work hard enough. Military training and education are designed with an eye to

instilling relevant virtues, and situations might hence have less influence on trained soldiers than on people who lack that training. What is more, some critics point out that the situationist argument rests on a partial interpretation of research in social psychology: we rarely read about the many participants in the experiments of Milgram, and Zimbardo did not succumb to situational pressures (see, for instance, Griggs and Whitehead III 2014; Perry 2013).

The above leaves some ground for optimism regarding the role of character formation. On the other hand, a military ethics education that does not take the actual possibilities and shortcomings of a character-based approach into account would be too theoretical. The ethics education of military leaders should not only further virtues but also give insight in the factors that make unethical conduct more likely to take place. The well-meant advice to avoid morally challenging situations (Harman 1999) is clearly not very helpful in a military context, but with more knowledge about the influence of situational factors, military leaders can do more to make the erosion of moral standards less likely to occur.

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## Does Leadership Matter?

The overestimating of the role of character in ethics has a counterpart in the field of leadership studies: according to leadership scholar Barbara Kellerman, people overrate the importance of the role of leaders and leadership (Kellerman 2012). A “leadership attribution error” leads to the mistaken assumption “that good outcomes depend on good leaders; that good leaders are good people; and that good people can be trained, or educated, or developed, to be good leaders” (Kellerman 2012, 180–181). According to Kellerman, this misconception led to today’s thriving leadership industry. Its results are mixed at best: according to some it has not made leaders necessarily more effective and certainly not more ethical (Kellerman 2012). Not unlike virtue ethics, this belief in the significance of what leaders do underestimates today’s increasingly complex situation that often makes leaders considerably less influential than most people think they are. Over the last few decades, leaders lost influence, and power has shifted to followers.

Most leadership theories are primarily about how to augment one’s impact as a leader, and from that viewpoint, this loss of influence poses a problem. Leadership theories such as that of transformational leadership assume that a leader has to have a lot of influence over his or her subordinates to be effective, while more modest leadership styles will be negatively portrayed as *laissez-faire* leadership (see, for instance, Bass 1999). According to Bass, a transformational leader “is charismatic such that the follower seeks to identify with the leader and emulate him or her. The leadership inspires the follower with challenge and persuasion, providing a meaning and understanding. The leadership is intellectually stimulating, expanding the follower’s use of his or her abilities. Finally, the leadership is individually considerate, providing the follower with support, mentoring and coaching” (Bass 1996, 5). Yet, it is the question how intellectually stimulating and individually considerate visionary a charismatic and visionary leader really is. Also, one could also argue that with

today's better-educated followers strong leaders are less needed than they once were, also in the military.

However, in line with most modern leadership theories, many Western militaries still want their leaders to be strong and visionary. (At the same time, militaries consider decentralization of leadership important too. But such leadership can only work if leaders are prepared to stay on the background now and then and occasionally suppress their desire to interfere.) Most recent leadership theories emphasize "the omnipresence and omniscience of the leaders," and there are just as "many military leadership doctrines [that] build on these theories" (Vogelaar 2007, 36). (It is not unlikely that in the military popular view that management is inferior to leadership is also due to the idea that leaders are strong, visionary, and active, as opposed to inactive, merely facilitating managers (see, for instance, Kolditz 2007).) There are a few theories that espouse a less obtrusive leadership, but these theories do not get a lot of attention in most militaries. An exception is Robert Greenleaf's theory of servant leadership (Greenleaf 2002), which did draw some attention from military circles, but on the whole this theory remains rather unclear and undefined (Northouse 2021; Russell and Stone 2002).

But if the role of character and virtues is overestimated in military ethics, while the role of charismatic, visible leaders is overrated when we talk about the role military leaders have, where does that leave us on the subject of leadership and ethics? Situationism and the idea that we are witnessing "the end of leadership" (Kellerman 2012) together suggest that, as neither character nor leadership matter a lot, it is not the ethically behaving soldiers or leaders that deserve praise or blame, but only the environment that steers them. But that conclusion might be too quick: even if it is true that the situation determines conduct to a large extent, this does not necessarily make moral responsibility evaporate; one could also maintain that responsibility shifts from the perpetrators to their superiors. Zimbardo criticizes the assumption made by many generals and high-ranking government officials that the Abu Ghraib prison scandal was the work of "a few bad apples." According to Zimbardo, the "barrel of apples began rotting from the top down" (Zimbardo 2007, 415).

With this blaming of the political leadership and the higher leadership of the organization, Zimbardo suggests that leaders are no longer excused by the situation they find themselves in once they reach a certain threshold level in the organization. The context soldiers have to work in is not a given but at least partly the result of the actions and policies of military (and political) leaders. Political and military leaders have their share in forming (and thus bear some responsibility for) the ethical climate (see also Schaubroeck et al. 2012) that has an effect on the chances of military personnel crossing the thin line between lawful force and excessive violence (van Doorn 1975; Neitzel and Welzer 2012; compare Browning 1992, 163). An unpublished US Army General's report on the Haditha incident (in which Marines killed 24 Iraqi civilians) found that "[s]tatements made by the chain of command (. . .) suggest that Iraqi civilian lives are not as important as U.S. lives, their deaths are just the cost of doing business, and that the Marines need to get 'the job done' no matter what it takes. These comments had the potential to desensitize the Marines to

concern for the Iraqi populace and portray them all as the enemy even if they are noncombatants” (Bargewell 2007). Looking back on Abu Ghraib, Mastroianni reaches a somewhat similar conclusion: suboptimal leadership makes it easier for morally corrupt individuals to misbehave (Mastroianni 2013, 62–3). Holding leaders responsible is also more or less in line with the common intuition that, after having reached a certain organizational level, it becomes less convincing to hide behind the fact that you were just doing as others did or were merely following orders – although leaders are of course influenced by the situation as well (see also McDermott and Hart 2017).

So although leaders partly shape the situation, the reverse also holds true, especially at the lower levels. As McDermott and Hart write about the ethical challenges for small-unit military commanders who are to explain crucial ethical concepts to their young warriors (in general not too interested in the nuances of virtue ethics or deontology): “The sophisticated commander, well-schooled in ethical theory and social psychology, can keep his soldiers on the right side of the line. However, above all, he must remember the ‘Leader’s Trap’; he is just as human as everyone else, and should he slip down the slope of evil it is likely that the rest will loyally follow” (McDermott and Hart 2017). But although leaders are of course immersed in the situation themselves, it perhaps makes sense to already attribute some moral responsibility to those who have reached the level of junior commissioned officer. They will have received military training but hopefully also the education needed to recognize and counter the situational pressures under which misconduct is more likely to happen.

In the era of the strategic corporal (Krulak 1999), with many non-commissioned officers fulfilling important leadership roles with a relatively high degree of autonomy, there is ample reason to attribute responsibility to these non-commissioned leaders too. In the Australian case of failing leadership in Afghanistan, mentioned in the introduction, it was especially the leadership at the lowest – corporal and sergeant – level that was to blame. The Afghanistan Inquiry report states, for instance, that, although “commanders at troop, squadron and Special Operations Task Group level must bear some responsibility for the events that happened ‘on their watch’, the criminal behavior of a few was commenced, committed, continued and concealed at the patrol commander level, that is, at corporal or sergeant level” (2020, 30). In view of that, it would make sense if militaries gave more attention to the ethics education of NCOs and soldiers (instead of reserving most ethics education for [aspiring] officers) so that they are prepared to face the testing of their leadership that war and peacekeeping inevitably bring.

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## Conclusion

Many moral philosophers appear to have a clear preference for one the three main schools in moral philosophy, be it virtue ethics, rule-based ethics, or utilitarianism. Yet in real life, most people tend to see a role for virtues and rules alike while also taking the consequences of an act into consideration. It seems that those involved in

military ethics education are practically duty-bound to adopt a similar mixed approach. An ethics education of military leaders should, for example, have attention for rules, procedures, and codes but also for virtues and character. To state it somewhat schematically: military leaders should be an example by displaying virtues, but also maintain certain rules, and take into account the consequences of their own acts and that of their subordinates. At the same time, they should also have an eye for the situation and how it can adversely affect their own conduct and that of those they lead. Even in a time that leadership is increasingly questioned, sound leadership at all levels is what keeps military personnel from behaving unethically.

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# Economics, Logistics, and (Human Resources) Management in Military Sciences

Joseph Soeters

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## Abstract

This chapters aims to introduce the section on economics, logistics, and (human resources) management in military sciences. The military is best known for its successes, or the lack thereof, on the battlefield. In this context, topics such as tactics, military leadership, and command and emotions like courage and persistence are often studied. Less well familiar is the idea that military success and defeat are highly dependent on the way the military organization has been structured, prepared, trained, and equipped before the real action starts. Similarly, it is underestimated how much military performance depends on financial means, logistics, and human resources during the action. The idea that economics, logistics, personnel policies, and management are only relevant in peacetime conditions is simply wrong. This chapter uses historical examples and insights from current management theory and research to make this clear, and, at the same time, introduces which topics will be reviewed in the other chapters of the section on management, economics and logistics. These issues play at the national level

Joseph Soeters is a professor emeritus from the Netherlands Defense Academy and Tilburg University.

J. Soeters (✉)  
Vught, The Netherlands



but certainly also in the international arena where the different allies and competitors meet.

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### Keywords

Management · Defense economics · Military logistics · Human resources management · Military organization

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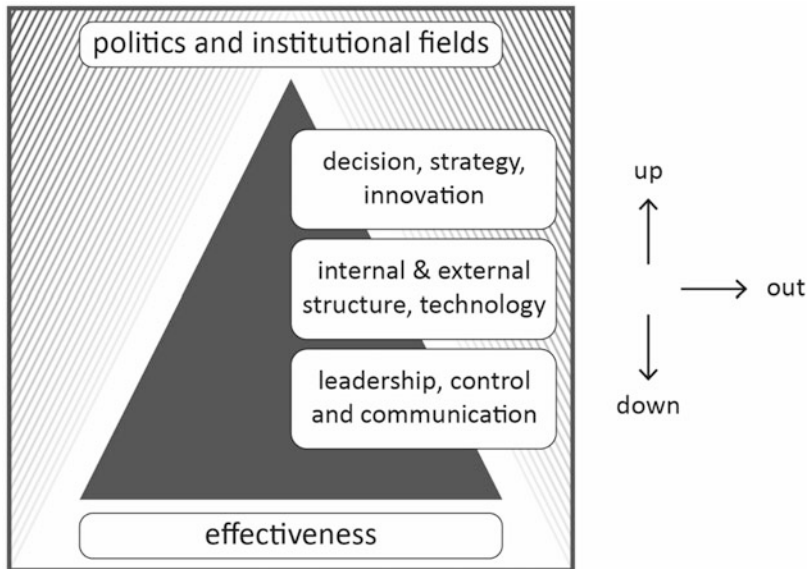
## Introduction

Military organizations are among the oldest manifestations of human efforts to deliberately get things done. Long before civilian enterprises and industries took shape, the military demonstrated how buildings could be constructed, ships could be built and navigated, how thousands of men could be disciplined to fight their way forward, and how occupied territories could be governed. The military paved the path toward understanding how strategies and maneuvers, people and material resources, money, and technologies could fit together to reach for ambitious goals. The military set the examples in strategy development, organizing, leadership, engineering, and logistics (Van Creveld 2004; Ahlstrom et al. 2009).

Yet, with the arrival of the industrial revolution, the roles have gradually switched. Whereas, centuries ago, engineers could predominantly be found in the military, they steadily made their entrance in the industries that were newly founded as of the second half of the nineteenth century (Shenhav 2007). These quickly expanding companies also increasingly hired other experts, such as economists, legal and logistics experts, and social and behavioral scientists. Since then, civilian industries and business corporations are in the lead of developing management knowledge, which has enabled the emergence of increasingly sophisticated technical artifacts and services. Since then, the military could learn from civilian organizations, more – so it seems – than the other way around (De Waard and Soeters 2007; Soeters et al. 2010; Soeters 2020).

Reviewing the role of managerial knowledge for the military, it is often said that management knowledge (including adjacent areas such as legal and economic expertise) is only needed for the military preparing for action, hence the military in pre- or postwar conditions. In such a view, management is associated with rationality, planning, white collar-work, and clean hands, whereas the actions in military operations predominantly require emotional strength, improvisation, dirty hands, and virtues such as courage and heroism. Both assumptions in this view, however, are wrong.

Management in peacetime or in immediate pre- or postwar conditions is also about emotions and simply getting things done, whereas in operations rationality, planning, and office work have always been, and still are, tremendously important. Hence, a first observation to introduce this part of the handbook is that management knowledge is important for the military in both *cold* and *hot* conditions. As Brown (1953: 7) formulated this already more than fifty years ago, “Effectiveness of our armed forces in war depends upon the effectiveness of our armed forces in peace.”



**Fig. 1** General overview of (military) organizations. (Derived from Soeters 2020: 7)

Perhaps one can even state that in the current times, in which technologies and professional skills have become so dominant, warriors turned into managers, as Michel Martin phrased this (1981).

What do we talk about when we talk about the role of management, economics, and logistics in the military? Figure 1 provides a general overview.

This figure shows that the military organization – like any other organizations – knows various levels. Usually at the top of the organization, strategic decisions are made about how to prepare for action, how to invest in new technologies and innovations in general, how to use the budget that is available, of course about the strategic goals of actions and operations that are conducted, and also about how to increase or protect the budget in the political arena (e.g., Brooks 2016). At the middle level, such decisions relate more to everyday practice, in particular, with regard to the build-up of the organization, the procurement of equipment, the supply and maintenance of material resources, cooperation with partners inside and outside the organization, and the introduction and use of new technologies as well as the recruitment and training of personnel. At the bottom level, the everyday realities on and off the field of operations occur, including direct leadership and command, control, and communication. Here, the performance of the material and the human resources, and the interplay between them, are the critical factors.

As any other organization, the military is surrounded by influences from outside. For the military in particular, politics are crucial. In democracies, elected politicians, often without any military experience, decide about the expenditures for the military as well about the beginning and ending of military action. Besides, elected politicians make the decisions about what needs to be achieved by the military. As politicians are so important, the military needs to influence them, “manage” them

so to speak, which could be called *managing up*. This process adds to the usual way of *managing down* one's employees as well as *managing out*, which refers to collaboration with partners such as contractors, suppliers, and militaries from other services and armed forces from other nations. Multinational military cooperation has become increasingly important over the years, and this development is not likely to come to an end anytime soon. At the end of the day, it is all about military effectiveness, which is reaching the goals that have been formulated before the action was initiated (Peen-Rodt 2012).

All in all, the military is confronted with ensuring and using financial resources, with procuring, using, and maintaining material resources and with recruiting, training, and commanding personnel, the human resources, in the military organization. These are the topics that will be dealt with in the remainder of this introductory chapter. Accordingly, the role of this chapter is to serve as an introduction to the economic, logistical, and managerial issues in military sciences.

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## Economic Issues in Defense and Security

The size of the budget has always been the major economic issue the military has to deal with (e.g., Hitch and McKean 1960; Hartley 2018). It also is the most controversial and political one, at least today. While the budget in earlier times – up until the decolonization wars – was as high as it was uncontested, it nowadays has become a major issue. In those earlier times the military itself was undebated, at least most of the times. The military was there to protect the nation against invasions and attacks and, if things went well, it led to conquests and prosperity because large gains could be won through the richness of invaded or colonized regions. Despite occasional criticism, the military at the time had a clear “business model” that was accepted by most.

In current times, however, invasions and colonization have become illegal, and clearly out of fashion. This is not to say such endeavors and the threats thereof no longer exist, but they have become relatively scarce (Pinker 2018: 156 ff.) or take the form of, for instance, diplomatic, information, legal or economic warfare. In particular, after the demise of the Soviet Union in the 1990s the idea that a new world war was looming had disappeared. Yet, a number of smaller wars emerged – in particular on the Balkans, but also in Africa as well as in Afghanistan and Iraq, and in other parts of the Middle East, such as most recently in Syria. This led to increased requests for military interventions, none of which was without debate, however. In the 1990s and the first two decades of the 21st century, *wars of choice replaced wars of necessity*, as it was called. Of course, one can discuss choices – and nations took different positions in these discussions –, whereas questions about dealing with necessities are hardly debatable. Since Russia's invasion in Ukraine in early 2022, however, the idea waned that military action is something one can *chose* to engage in, while the idea of worldwide conflict seems to have become a new reality again. Now, there is more agreement among nations about the necessity of having adequate military resources, although differences persist.

In the USA worldview, in particular, the planet is full of (potential) enemies and foes, and the ambition is to be in the lead of the pack, with the explicit wish to “own the skies.” Hence, the US defense budget is of astronomic proportion (about 3.25% of the national GDP), which due to America’s giant economy exceeds the budgets of all other nations by far, including military expenditures in China, Russia, and Saudi Arabia, for instance (Hartley 2018: 54). But the US government progressively expresses its annoyance that the US worldview is not adopted by their allies. Such criticism does not primarily pertain to the UK and France, two nations that concur in their emphasis on the usefulness of military solutions and, hence, spend considerable sums on defense and security. In contrast, a number of continental European partners in the NATO alliance have been repeatedly admonished by the US government to increase their budgets for defense and security, as their contribution was considered far too low. After Russia’s invasion in Ukraine, this discussion came more or less to an end. Suddenly, nations such as Germany and the Netherlands, but in fact many EU-countries were prepared to increase their budget for the armed forces to a considerable degree. Yet, they are still far from expending the same number of financial means as the U.S.A.

In expressing the wish to see their allies create larger defense budgets, the US government is not without self-interest: if allies will raise their budgets for defense and security, most likely major parts of these increases will go to the American weapons industries that for a number of reasons can use every bit of extra money. The US defense budget, although giant, is not unlimited and an increasing part of it goes to domains that are related to human resources, such as veterans’ affairs and recruiting costs and wages that need to be competitive with the civilian labor market (Dunlap 2011). Therefore, there is a strain on the American defense budget that prevents the limitless purchase of newly developed and very costly technologies (Dunlap 2011). Given this situation, every F-35 or C-130 sold to foreign governments helps sustain the American weapon industry and, hence, the American economy.

Next to debates about expenditures, there is also discussion about the actual contribution of national troops in the conduct of operations. Some countries, not surprisingly those with the highest budgets, tend to be first in initiating (combat) operations, and some, such as Canada and the Netherlands in Afghanistan, tend to be first to quit the action (Massie 2016). The US and the UK started the various operations in Iraq and Afghanistan that were conducted over the last 30 years; France and the UK were the main initiators of the bombing campaign over Libya in 2011, to which campaign Germany refused to participate. Clearly, Russia is another country that believes in the importance and legitimacy of military power, and acts consequentially, such as in Syria over the last decade and in Ukraine since the beginning of 2022. These differences relate to strategic cultures at the national level (e.g., Soeters, 2022).

Discussions about burden sharing among allies emerged in an unmistakable way during the operations in Afghanistan, a new “long war” that started with the assaults on American soil on 9/11/2001, led to substantial debates with respect to burden sharing among the allies. It was clear from the beginning that article V of the NATO Treaty would apply: “an attack on one is an attack on all.” In response to what happened in New York and Washington, the US government without hesitation

started operations in Afghanistan, the country where the origins of the attacks could be traced. After quick first results, the operations were expanded with the support of all NATO member-states and several other nations such as Australia. With this, the question of burden sharing among nations emerged. Clearly, the contribution of the US forces was larger than of all other nations taken together. However, as expressed in terms of the relative population size and GDP, the UK contribution was larger. Also, the relative number of casualties of the UK, Denmark, and Canada exceeded the burden of the USA (Bogers and Beeres 2013). All this, of course, says nothing about the effectiveness of the operations: did the operations turn Afghanistan into a safer and better country? After all, that was the goal of the operations from the very beginning.

A final economic issue related to the military concerns of efficiency and control. Other than operational effectiveness, efficiency is about time and money. Whereas effectiveness relates to the question whether or not the goals of an operation have been achieved in the course of actions, efficiency is all about the ratio between input and output. An operation may have been very effective but may have been not efficient at all (because the costs were too high). Also, a mission may have been very efficient (because it was inexpensive), yet it may not have reached any of its goals and aims. Effectiveness and efficiency are not the same.

A relatively new development in the military that is related to efficiency concerns is the increased hiring of personnel from Private Military Companies (PMCs). This is often done for political reasons, but also because the expenditures to hire such personnel are flexible and can be terminated as soon as the task, for which PMCs were engaged, is finished. Conventional military personnel produce costs before the job gets done and require expenditures that continue after the operations have ended. Hiring PMCs is based on considerations that immediately relate to efficiency concerns (e.g., Soeters 2020).

General efficiency-related reflections are: How much money has been spent to reach an objective, how much personnel has been deployed, how many vehicles and devices have been purchased and used? And, more importantly, what did the military do with these resources? The latter questions were not raised in historical times, when the military was hardly contested, but these questions have increasingly been put forward in the past decades (e.g., Norheim-Martinsen 2016). The answers to these questions often pertain to the number of patrols (on the ground, at sea, in the air) that were conducted, the number of personnel that were deployed to missions overseas, the number of targets that were bombed, and the exercises that were organized including the size of these exercises. These indicators say a lot about the throughput of the military production process but do not convey a lot about what in fact has been accomplished. Yet, oftentimes these are the best markers of military performance one can produce.

In order to ensure the efficient use of the resources, it is important to have a proper mix of management control instruments. Management control refers to cost control and financial policies as well as to material and human resources management and quality management (e.g., Soeters 2020: 119). Management control and the corresponding concept of accountability have their origins in military academies

(Hoskin and Macve 1988). It is about making sure that the financial means are properly spent in purchasing processes (and have not been lost due to nepotistic practices or fraud), and that the available resources have been used carefully – no waste, no pollution, no unnecessary abrasion and destruction, no unjustified depreciation of goods.

Management control consists of a mixture of the so-called hard, legal controls and soft, informal controls (Heeren-Bogers 2018). Whereas hard controls relate to cost accounting and the bureaucratic and legal control of transactions, soft controls pertain to behavioral tendencies among leaders and workers to act in accordance with the goals of the organization. This implies, for instance, that commanders need to display concrete behavior in line with what the organization deems fitting. Also, what is expected of personnel needs to be clear and doable, and there should be organizational support for those who want to express their disagreement of what in their eyes is going wrong. For sure, commanders have a large responsibility in realizing suitable soft controls to ensure the proper use of scarce resources, which is the quintessential challenge posed by the economic sciences and also in the military (Heeren-Bogers 2018).

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## Logistics in the Military, On and Off the Battlefield

Logistics is perhaps not the sexiest topic to study in the military, but throughout history logistics has proven to be one of the most important elements in the performance of armed forces. Logistics belongs to the field of operations management: getting things done by having raw material at the right time on the right place, process this raw material into ready-to-use, high-quality products or services, and get these products and services where and when they are needed (e.g., Slack and Brandon-Jones 2019). As to the significance of logistics, the military does not differ from firms or companies in the civilian domain.

Battles have been won or lost not so much due to differences in fighting power or combat spirit, but due to variations in the power to get the needed stuff, staff, and information at the right time on the right place, and to sustain this capacity over a longer period of time. Whereas the usual emphasis in military training is on courage, leadership, and tactical proficiency, generals nowadays have learned to speak about tonnage, inventory levels, and supply chains (Immerwahr 2019: 282). Today's generals know what counts in operations nowadays. And they have become good at it.

The Israeli scholar Martin van Creveld stressed the importance of operations management and logistics in his historical overview called "Supplying War" (Van Creveld 2004). He lucidly demonstrated how often logistics have been decisive in the final result of military engagements. He also showed that due to technological advancements the distance for the military to operate has become increasingly larger. It went from nearby operations in the times when men and later horses were the main means of transport, to destinations that were much further away when, respectively, sailing, steam machineries, fuel engine technology, and aviation made military

actions possible over much larger distances. Today, the whole globe is the arena where military action can take place, including the skies, space, and the digital dimension.

The importance of logistics in military action has become perfectly clear in the operations that led to the liberation of Europe, starting with D-Day on 6 June 1944. The landings in Normandy and the following supply chains had a large influence on the success of the allied operations. To stop the ceaseless supply of allied staff and stuff, the troops of Nazi-Germany launched a desperate attack to regain the port of Antwerp in the winter of 1944/1945 – the so-called “Battle of the Bulge.” This contra-attack failed not because of a lack of fighting spirit or fire power on the Nazi-side, but because of an inadequate supply of people and material resources, in particular fuel and ammunition. The attack simply stopped because after a few days there were no more supplies for the Nazi-troops on the right place at the right time (Cole 2015). A contra-attack to stop successful logistics failed because of unsuccessful logistics.

Since then, military logistics has developed further, setting the examples for the advancement of business logistics in commercial firms, today encompassing the movement of people and goods to all places on the globe and back. Today’s globalization and advanced logistics go hand in hand. In the military, this has become apparent in the ways the US armed forces operate from all over the world. Immerwahr (2019: 282 ff.) in his book explains how logistical innovations increased the pace of operations, but also enabled the military to move through places without carefully preparing the ground first. Today, the US forces demonstrate that a long-distance network can be operated without seizing large areas or zones. Colonies are no longer needed to deploy all over the world; bases, however, are. The US is very good at maintaining bases, from where they can operate, all over the world, from their own coasts to Africa and Asia, and further across the Pacific back home – or the other way around. To a lesser degree other nations, such as for instance the UK, France, Russia, and China, have similar “warehouses” for forward storage worldwide.

In addition, technological advancements in aviation made planes bigger, more powerful, and capable of covering longer distances, whereas at the same time cargo became smaller. Engines could be delivered in parts, food could be dehydrated, package material lost lots of weight due to the development of plastics, and information could be processed and distributed much quicker, almost real-time nowadays. The newest innovations pertaining to 3D-printing will make cargo even less sizable, as it will be possible to produce spare parts and other necessities right on the spot, in the area of operations.

Nonetheless, the deployment cycle still creates considerable logistics challenges in the supply chain, as the ISAF-mission in the first two decades of the century demonstrated (e.g., Rietjens et al. 2010; Van Kampen et al. 2012). Because this mission required considerable numbers of “boots on the ground,” lots of supplies were needed to make the mission legitimate, successful, and acceptable for personnel that could also have chosen any other job than being in Afghanistan. Therefore, military personnel needed to be protected and taken care of properly, in terms of safety, health, food, hygiene, lodging, equipment, and leisure time facilities. This



necessitated the preparation and transport of many people and substantial tonnages, which was not even the largest challenge. Moving staff and stuff to the mission areas was generally not the hardest thing to do, despite the looming dangers to the flights and convoys. The hardest test perhaps was making sure the stuff was available on the right place at the right time, in sufficient quantities, qualities, and retrievable in the many containers that were sent overseas. It showed that the military was perhaps not as good at the integration of information technology and logistics as major business firms, such as retail chains, already were.

After the mission had ended, everything needed to be redeployed again, and refurbished at the home base. This also required careful planning and it created an additional new challenge. What to do with the stuff, the material resources in the mission area, that was either no longer useable or was too expensive to dismantle and bring back home? Buildings and other infrastructure could often be handed over either to the allied militaries that would replace the parting troops or to host-national parties. When the Dutch troops had to leave the Afghan province of Uruzgan in 2010, their base was taken over by the American contingent, whereas other buildings could be used by Afghans.

The other aspect, waste processing, has become more challenging. In historical times, material resources could be looted and left behind as pleased, because that was the burden host-nationals simply had to carry. Remember that most of the objects on display at the British Museum in London are looted or simply taken away from all over the world by British troops and officials. This was a practice that lasted centuries but has nowadays become illegal; it nowadays leads to discussions about returning the objects to the rightful owners; in the case of the British Museum this concerns in particular the national governments of Greece, Egypt, Benin and Nigeria.

As to leaving behind goods that are no longer of use, regulations and practices are not as strict, but there is an increasing awareness that military forces ending their mission abroad are responsible for waste management. This requires cleaning up the area of operations, in whatever ways possible. As said, this is not yet as regulated as stealing properties, but since the Vietnam War, in which chemicals – *Agent Orange!* - generated damage to the population long after the US troops had left, awareness and sensitivity have increased. But not enough. There is still a long way to go to ensure that military logistics also includes care for the host-national population and areas after the operations have come to an end. Sustainability, a hot topic in business logistics, still has to make its way to the military (e.g., Reno, 2019).

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## Human Resources in the Military

The next field of application of managerial thinking to the military relates to the study of human resources (HR) in the armed forces. Military force is manpower force, as manpower is traditionally needed to control geographical areas. Today manpower is also increasingly required to operate technological instruments and devices. In particular, since the abolition of conscription, the All-Volunteer military



organization needs to compete with other employers, to acquire a sufficient portion of an increasingly limited young workforce. The military, after all, has become “just another job” (Moskos and Wood 1988).

In particular, the fact that military work progressively has become technological work including work in the digital dimension introduces a sort of “war on talent” on the labor market. New personnel need to be highly qualified. Traditional bureaucratic organizing and personnel management may no longer be fitting enough to deal with such challenges. Therefore, experiments with newer and more flexible approaches to recruit new specialized personnel, including career and wage differentiation, are needed in military organizations (e.g., Geluk et al. 2020).

This is particularly pressing because for the military, human resources management is an even more urgent matter than it is in conventional civilian organizations: personnel with proper military qualifications cannot be attracted from the external labor market. There are no general educational facilities in society that prepare people to get ready for the military job. The military have to do this by themselves, for which reason they have to maintain their own educational institutions, such as military academies, garrisons, and other training facilities. The military are responsible for all aspects of the Human Resources Cycle.

The HR-cycle includes the recruitment and selection of new personnel, their training, education, and preparation for action as well as their actual performance and the way their performance is guided, controlled, judged, and compensated. In addition, employees’ exit, retirement, and care after their departure need to be taken care of (e.g., Dessler 2019).

The very specific character of military work, implying the possible experience and use of large-sized violence, is likely to generate health- and life-related difficulties for at least parts of the military workforce. Besides, the social position and mental health of veterans have always been an important point of concern for the military. After all soldiers on mission have often experienced events and behaviours that are likely to lead to traumatic reactions, even or particularly, after the military job has ended. Another specific aspect of military’s human resources relates to the increasing importance of the so-called reserve soldiers, most often retired military but still active (wo)men, who can be called up for duty in missions or other assignments. Such reserve forces have become increasingly important in operations conducted by nations such as the USA, the UK, and Israel (Lomsky-Feder et al. 2008). A chapter elsewhere in this Handbook specifically deals with the reasons behind and the characteristics of the recent rise of reservists’ role.

Other than that, there are two topics in connection with military’s human resources that attract increasing attention these days. First, connected with the growing significance of women’s rights as well as the increasing need for well-educated personnel, women access almost all positions in the military today. For the first time in history, this provides the possibility for the military to really mirror the *whole* population, and not the *male* population only. Recently, in fact rather late, also combat positions have been opened up for women, despite the traditional masculine character of such “work.” Hence, “female warriors” enter the scene, which seems to

trigger the excitement of many men and women, not only of those who design attractive female heroes in computer war games.

Not so much in relation to combat, but more in the context of peace missions gender-balanced forces are seen as indispensable to attain proper results. The reason for this is simple: peacekeeping requires continuous interaction with the local population and half of the population is female (e.g., Bridgess and Horsfall 2009). Another topic in this connection relates to the work–family balance (e.g., Moelker et al. 2019). The work–family balance is not only of concern for female military personnel but also for the wives of military men who have a professional career of their own, and, of course, for the military men themselves. The recurrent deployment of military personnel puts a burden on the family, a burden that partners often find difficult to carry if they have to take care of children and work at the same time. Increasingly, the military finds itself in a position in which they need to take responsibility for this specific matter in HR management.

The second major topic related to human resources in the military refers to the inclusion of foreigners and minorities in the military. Over the last decades, societies have become more heterogeneous as migrant workers, refugees, and asylum seekers and their families from different regions and religions settled in nations that previously were more used to emigration than immigration. The challenge of including these “newcomers” in the military is also a matter of civil–military relations, as an essential element of democratic governing is that no one should be excluded from civil and military service. Yet, next to these democratic considerations, there are also operational considerations that underline the necessity of including minorities in the military. First, there is of course the shortage in supply of qualified personnel. For this reason, increasingly more nations with an All-Volunteer Force open their armed forces for personnel from designated other countries, where they have the same mother tongue for instance, such as Belgium vis-à-vis France, the Netherlands, and the other EU-countries.

As to the integration of minorities in the armed forces, there are operational reasons as well. In military missions abroad, chances are that the interaction with the host-nation population will be more fluent, subtle, and supple when at least parts of the mission force resemble the people in the area of operations. Bosman and associates (2008) demonstrated how Dutch Muslim soldiers were quite apt in relating to the local population in Muslim mission areas, such as Bosnia, Iraq, and Afghanistan. The presence of a certain “natural” cultural awareness among parts of the troops is also likely to stimulate the much needed cultural awareness and competence among the whole of the mission contingents (e.g., Haddad 2010). This may happen in the same manner as reserve soldiers with their experience in the civilian world are likely to mediate and in fact “soften” the military’s – sometimes rough – ways of dealing with people in the areas of operation (e.g., Lomsky-Feder et al. 2008). This point also connects with the logic of striving toward a more gender-balanced composition of contingents on mission (e.g., Bridgess and Horsfall 2009).

The use of Private Military Companies – a consequence of outsourcing of military activities to organizations that operate on the market – is very much related

to efficiency concerns, as we saw before. Here, human resources management, economics, and financial management in the military come together. The use of PMCs creates flexibility in military expenditures, which is a very attractive policy option. On the other hand, the practice of using PMCs has been criticized because their activities may evade the command and control of the conventional hierarchical chain in armed forces and may lead to a weakening of the traditional military culture (Soeters 2020; Heineken 2014). PMCs' work is most and for all guided by the content of contracts. Yet, what is stipulated in contracts often is relatively general and vague, perhaps deliberately so, because formulating specific goals and actions tends to create clear criterions to check what has been done. This is something that politicians oftentimes want to avoid. Actually, this may be something that military and political contract negotiators strive for: flexibility not only in spending but also in the formulation and control of goals and practices.

A last aspect in the domain of HR management is ensuring proper, ethical behavior of the troops, both inside and outside the organization, i.e., to fellow-servicemen and women as well as to the people in the area of operation who really experience the actions conducted by the military. This is about preventing – and if needed punishing – all sorts of transgressions (stealing, abusing, and violating other people, their rights and their properties). This requires managing in all directions: down, out, and up. Here again, commanders play a quintessential role as we saw before in our discussion about the importance of soft controls in the military (Schaubroek et al. 2012).

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## General Managerial Issues in the Armed Forces

Talking about management in the armed forces is also talking about the structure of the military organization (Soeters 2020: 11–24). Traditionally, the military organization is a specimen of bureaucratic organizing, with a well-defined hierarchical chain of command, a clear division of labor, in which one element is posited in a larger element (such as in the army: squad, platoon, company, battalion, brigade, division), and in which compliance with the rules dominates the organizational culture. This “engineering” set-up dates back to the Roman Empire and before (Van Doorn 1975; Shenhav 2007), and it is likely to be the dominating model in a long time to come. After all, the military is something unique that it is good at what it is set to do and therefore does not to be good at learning, as some scholars even very recently argued (Hasselbladh and Yden, 2020). But this is a strange position.

As more flexibility is required because tasks for the military become more varied and societal views about what is legitimate become more complex, there will be an increasing need to sometimes deviate from military core ideas and engage in processes of organizational learning (Soeters, 2020). This may occur, for instance, if a certain mission requires the deployment of a tailored task force combining various traditional elements in one unit. Then, the standard set-up of the force needs to be adapted to what is needed in a specific mission. Additionally, the emphasis on rules will be maintained because this manufactures health, safety, and

legal protection, but if the situation demands, personnel are allowed to make decisions that are not strictly in accordance with the rules yet prove to be better. Commands from above need not always be unconditionally accepted, as they may also be discussed by the rank-and-file, particularly before the action. We saw this when talking about the growing importance of soft controls. Occasionally, ethical considerations may supersede rules and commands. This is not a standard practice, but such reflections about commanders' or servicemen's transgressive behavior have become more prominent than before, in all kinds of organizations and, hence, also in the armed forces.

A second over-all issue concerns the strategic positioning of the military and military strategic management in general. The figure at the beginning of this chapter showed that the so-called strategic apex of any organization is involved in the formulation and implementation of strategies. This of course also applies to the military, even though politicians have the final word in this decision making. Yet, the military strategic apex may influence what politicians think and do, among other things by demonstrating how much needed they are. This starts with depicting threats all over the world and in all sorts of domains. Threats are oftentimes socially constructed. Portraying many others and their actions as enemies and acts of war – a process of “hostilization,” so to speak – naturally implies there is a large need for the military and budgets will increase.

When the budget is sizable enough, this infers that the military will do a lot; from assistance in case of disasters at home, to support civil authorities and health organizations abroad, to the training of foreign militaries, to patrolling on sea to protect commercial ships against pirates, to espionage and intel gathering, to lethal drone operations, to digital warfare, and to straight combat. You name it, the military does it, oftentimes outside of the general public's view. The problem of this tendency is twofold: the request for more budget will never stop and what the military does escapes from the attention of society and even the commanding politicians (Brooks 2016; also: Mazzetti 2013). This concern, related to strategic management in the military, may affect civil–military and political–military relations, even in mature democracies. It is likely to make the military forces more crucial and powerful than is perhaps needed in reality. Be that as it is, the pairing of problems and solutions, of threats and military action, is complex and much more subject to political views and feelings than to academic knowledge.

A final point relates to international management in operations. Military operations nowadays are usually conducted in an international framework because allying with others increases the size, power, and sustainability of operational resources as well as the international legitimacy of the actions. Given the international set-up of most missions today, issues of differences in national strategic cultures and operational styles are likely to come to the fore. If not properly managed, the confluence of national views, interests, and habits will create more misunderstanding and problems than one would wish for (e.g., Soeters 2020: 174–187). Even the simple act of information sharing may be difficult.

## Summary

In this introductory chapter, we have outlined the main themes and challenges that surface in the domain of economics, logistics, and (human resources) management in the armed forces today. Academically, these subjects belong to the field of business economics, business and public administration, organizational sociology, and psychology as well as information technology and engineering, the latter to a certain extent.

All these academic disciplines are essentially empirical, which means they are focused on researching observable phenomena in everyday reality. In this, they rely on a gamut of methodological tools, with a traditional emphasis on the collection, analysis, and modeling of quantitative data, particularly in engineering, economics and the traditional social and behavioral sciences. Yet, increasingly, qualitative data are valued to comprehend managerial practices and their effects. An example would be the work by Henry Mintzberg, whose insights and findings have been decisively influential while being backed by qualitative data only. His work applies to profit firms as much as it does to military organizations (e.g., Soeters 2020: 78–91). In general, one can state that the standard methodologies and epistemological stances in the managerial sciences pertain to the study of managerial occurrences in the military too (e.g., Deschaux-Dutard 2019). Except for political views and feelings of national pride and pain that – most unfortunately – sometimes permeate the military sciences, there is not a lot of debate about the various ways to study the military.

New developments in the domains of economics, business administration, and social sciences will increasingly rely on big data analysis and model simulations. Big data analysis refers to the study of unstructured data, such as information on internet searches, telephone calls, and the physical movements of people, as much as it pertains to the examination of structured data, such as business transactions (George et al. 2014). It does not require a lot of imagination to see that this development will be important for the study of the military and their operations, too (Soeters 2020: 169).

This introduction intended to pave the path for four more chapters that are broader and at the same time more in-depth, each focusing on the different elements of this part of military sciences. It will show that it is hardly possible to exaggerate the importance of these topics. Without proper management, logistics, and (human resources) management it is impossible to conduct successful military operations and bring them to a satisfactory end. Increasingly, military's performance depends on managerial knowledge and practices, in the broadest sense of these words.

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## Cross-References

- [Behaviour Economics](#)
- [Challenges in HRM in Military Organizations](#)
- [Defence Management and Economics](#)
- [Dynamic Intersection of Military and Society](#)
- [Hybrid Organizing](#)
- [Management, Economics and Logistics in Military Sciences](#)

- ▶ [Military Behaviour and Ethics](#)
- ▶ [Military Design](#)
- ▶ [Military Psychology](#)
- ▶ [Military Sociology](#)
- ▶ [Rationality and Irrationality in Military Organizing](#)
- ▶ [Strategy and Doctrine](#)
- ▶ [The Role of Operational Research in Military Personnel Management](#)

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# Human Resource Management for Military Organizations: Challenges and Trends

Tessa op den Buijs and Peter Olsthoorn

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## Abstract

In this chapter, we examine the challenges military organizations face today in terms of their HRM policies and the effect of the institutional environment and strategy on these policies. We begin with an overview of the evolution of HRM over time, and how it is understood today, and will outline some general theories within the HRM domain. Today’s changes in, for example, the internal and external environment of military organizations pose important challenges for the military’s personnel policies and organizational fit. We will discuss the reactions by military organizations to these challenges. What trends do the challenges lead to in relation to the professionalization of the armed forces?

T. op den Buijs (✉) · P. Olsthoorn  
Human Resource Management and Leadership at the Faculty of Military Sciences, Netherlands  
Defence Academy, Breda, The Netherlands  
e-mail: [Tp.od.buijs@mindef.nl](mailto:Tp.od.buijs@mindef.nl); [Phj.olsthoorn.01@mindef.nl](mailto:Phj.olsthoorn.01@mindef.nl)

Next, we elaborate on some of the more pressing challenges, such as motivating young people, the development in the field of talent management in relation to the organizational strategy, recent technological developments, labor market developments such as diversity in the workforce, but also private military companies, and of course the global security situation. We end this chapter with a short conclusion.

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**Keywords**

HRM · Organizational performance · Organizational fit · Military professionalization · Labor market developments · Talent management · Diversity

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## Introduction

Human resource management (HRM) can be considered in both civilian and military organizations as a set of activities and responsibilities related to personnel and aimed at the optimal deployment of employees to contribute to the performance of the organization. HRM includes activities such as recruiting, selecting, hiring, training, remuneration, fringe benefits, assessment and development and outflow or dismissal of employees, as well as the welfare and health of subordinates (e.g., Boselie 2014; Dessler 2021). In short, the process from inflow to outflow is central to HRM. In this process each line manager is responsible for HR management. That responsibility consists of allocating personnel, i.e., placing the most suitable person in the right position and then orienting, training, assessing, and compensating the person to improve job performance (e.g., Dessler 2021). They direct employee development so they can perform their jobs with dedication and efficacy, be motivated, and experience job satisfaction (e.g., Boselie 2014). Ideally, both employer and employee are satisfied and know what they gain from each other (Boselie 2014). For military organizations, this not only includes caring for its active but also for its post-active personnel: something military organizations are obliged to do because military organizations have a special duty of caregiving to (former) employees. For instance, when people have served in the military, they usually qualify for veterans health care. For example, in the Netherlands, the Veterans Act was passed in 2012 and became effective in 2014. This law regulates the recognition and care of veterans and their relations (Overheid.nl 2020).

In most organizations, HRM departments and HR specialists support the line managers. These specialists assist in recruiting, hiring, training, evaluating, and promoting and rewarding personnel, as well as employee safety and health at all levels, among other things. Today, there are many trends that require HR specialists to take a more strategically important role in organizations. All kinds of influences from the environment are causing HRM to change. These influences include technological change, increasing workforce diversity, a new generation of young people and their motivation, the labor market, globalization, and economic influences.

In this chapter, we examine the challenges military organizations face today with respect to their HRM policies and the effect of the organizational context and strategy on these policies. First, we start with an overview of the evolution of HRM and how it is understood today. We explain some key definitions and discuss the main HRM models. Since HRM policies and activities in general vary from country to country, we also go into some comparison between them. Furthermore, we pay attention to HRM policies and activities in the military context and look at the main differences between armed forces of different countries in this aspect. We will end this chapter with the challenges military organizations face today and the resulting implications for organizational performance and military professionalization.

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## The Development of HRM

After the Industrial Revolution, around 1750 in the UK and the early 1800s in the rest of Europe, the mode of production changed from hand-made goods to machine-made goods, a change that was accompanied by large-scale organizational and social changes. Machine production led to tasks being broken down into simple, small steps, and managers and supervisors became necessary to manage large-scale production. First-line supervisors were given full responsibility for the workforce (hiring, division of labor, wage determination, grievance handling, and firing). Several developments during this period eventually led to the rise of modern human resource management.

First of all, during that time companies began to take the employee welfare seriously in response to the autonomous position of first-line supervisors (e.g., English UK armed forces even introduced the skill and IQ testing at this time, along with other human factors research) (e.g., Chukwunonso 2013). Second, Frederick Taylor's Scientific Management (1914) tried to make the production process more efficient through (1) vertical division of labor (strict separation of executive work by the workers and the controlling/regulating work by staff departments); (2) horizontal division of labor (splitting up complex and difficult tasks into as small tasks as possible); (3) time and motion research: there is one best way, and when found it should be used by all workers; and (4) the introduction of performance pay (linking pay to the level of individual work performance and motivation) (e.g., Chukwunonso 2013).

However, the Hawthorne studies in 1924 by Elton Mayo demonstrated that workers were very receptive to their managers' attention and felt that managers were sincerely concerned about their work, implicating that psychological factors were important. This insight resulted in the appearance of the Human Relations Movement of Elton Mayo, which paid attention to the social function of work and stated that workers can only be productive if they are seen as members of the group.

It was this same period that Hugo Münsterberg (1913), one of the pioneers of applied psychology, extended his research to industrial/organizational and other business settings, and psychological applications such as testing, screening, and

training became more and more important in relation to organizational problems of that period. Labor shortages, high employee turnover, and increased production during World War II created a need for proper personnel administration with more attention to the psychological applications. Developments in recruitment and selection became increasingly important not only in military organizations but also in other organizations. The main emphasis was on recruitment and selection and then on training, enhancing soldier morale and commitment, discipline, occupational health, and pay policies (e.g., Chukwunonso 2013; Kaufman 2014). Personnel departments with a personnel manager emerged to take on such activities. Personnel management performed an administrative and maintenance function, including all management activities directed toward the employees. These activities were not really interrelated yet because there was no common goal, but there was a focus on work relationships, and the well-being of employees became important. As a result, workers became more articulate and better educated and made greater demands on their jobs. Job design and job enrichment made their appearance, and employee participation also increased.

Revisionism followed the Human Relations Movement in the 1960s and emphasized both technical and social organizations and the democratization and humanization of labor. Self-conscious people were central and required the organization to pay attention to their interests. Revisionism assumed that human beings are naturally oriented toward development and responsibility, and the attention to these aspects in labor relations increased (e.g., Boselie 2014).

In the 1990s, Porter (1990) introduced the New Economy: a shift from a production-based economy to a more service-oriented economy (see Boselie 2014; Chukwunonso 2013; Kaufman 2014). The economy consisting of physical tasks, task design and work design, and high unionization evolved into a service industry with sectors such as information technology (IT), telecommunications, and finance characterized by high knowledge intensity and web-based organizations, and a larger volume of data became available for decision-making. HRM systems for e-recruiting, selecting and recruiting military personnel, developing training strategies on-line, psychometric testing, and other data systems have developed rapidly since then (e.g., Boselie 2014; Chukwunonso 2013; Kaufman 2014). Although the old economy still exists in developing countries, work in modern and especially Western organizations has changed, and adaptation to change has become a dominant challenge in many organizations (Boselie 2014).

In recent years, important trends relevant for the field of HRM are further IT developments and digitalization, environmental or climate changes, and labor market trends to which organizations have to adapt. For example, there is an increasing attention to sustainable HRM (Müller et al. 2018) and green HRM (O'Donohue and Torugsa 2016). These trends in the new industry, the so-called "Industry 4.0" (e.g., Kamble et al. 2018), also lead to new directions in HRM, but have not yet been studied very systematically. However, one implication is that employees need to be trained differently if companies want to move in this direction and expect green attitudes or green values from their employees (e.g., Dumont et al. 2017). A method of continuous learning is needed, while employers are responsible for the

sustainability of the work of their employees. To that end, a relevant training system is important in establishing the capabilities of the workers of the future, leading to a culture of well-trained people with digital competencies (Dumont et al. 2017).

In conclusion, the HRM sector is one of the most important functions in organizations and has evolved into today's broad field of HRM, worlds apart from the much narrower human resource management of earlier days, which in turn emerged from institutional welfare work, scientific management, business psychology, human relations, revisionism, and other domains.

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## Definitions and Conceptions of HRM

Human resource management (HRM) is short for "management of human means of production." It is a widely used synonym for "human resources policy," "strategic human resource management," or "human resources services." In organizations the term HRM often refers to the departments responsible for supporting, advising, and facilitating primary HR activities (recruitment, selection and training, rewarding, appraisal, sustainable employability), so-called personnel management. However, sometimes HRM is something more than personnel management; the term then takes on a normative meaning. HRM denotes the function responsible for the selection and recruitment of staff, training, performance assessment, career development, disciplinary proceedings, pre-retirement advisory work, equal opportunity policies, and pay bargaining with a particular attention to employees (e.g., Boselie 2014). Some other authors reserve the term HRM for "a distinctive approach to employment management that seeks competitive advantage through the strategic deployment of a highly engaged and capable workforce, using a range of cultural, structural, and personnel techniques" (Storey 2007: 7). According to proponents of HRM in this sense of the word, HRM has a certain influence on organizational success (Boselie 2014) as there will be "competitive advantage by people" according to Pfeffer (1994); the employees of an organization determine its success. Higher productivity can be created when employees are managed according to HRM principles (Boselie 2014); therefore employee management is an important factor for achieving the organizational goals (Boxall and Purcell 2011). HRM can thus be a source for gaining competitive advantage and reinforcing organizational change.

Guest (1987) has already noted that HRM also includes HR specialists and line managers. These professionals need to be trained, for example, to reward fairly, or to network, depending on their HR roles and competencies. According to Boselie (2002) HRM covers management decisions that relate to policy and practice, together shape the employment relationship, and aim to accomplish the goals of the individual, organization, and community (Boselie (2002) cited in Boselie 2014: 5). Even though the contrast between personnel management and HRM is not completely fair because it compares the everyday practice of personnel management with an ideal of what HRM could be, it can be maintained that HRM stands for a management perspective that advocates the need for a coherent HR system consisting of various human resource policies to support the organization's strategy

(Buchanan and Huczynski 2004). HRM in this sense is sometimes referred to as strategic HRM (SHRM) to give additional emphasis to the context of the organization and the alignment of HRM activities to the core strategy, focusing on the long-term perspective of HRM.

These last two definitions hint at the fact that HR policies have to form a consistent whole. Employees should receive a clear message of what behaviors are considered important. Selection, promotion, and reward criteria should point in the same direction, for instance. Upon completion of the selection process, newcomers need to be institutionalized in a manner appropriate to the organizational culture, and this should be in line with the firm-specific training and reward system. When there is an internal or horizontal fit between HR systems, it means that different HR functions are integrated and do not happen separately from each other but reinforce each other.

With such a fit, employees are likely to receive consistent feedback. This is important, as employees should receive a clear message of what kind of behaviors deemed valuable – and which not. This is what is commonly called internal consistency. On a higher plane, the organization's entire HR policy should be chosen to support the strategic objective and in turn be coherent with the strategy and context of the organization: the so-called external consistency (or external vertical fit; Boselie 2014). The strategic fit means that there is no one right approach, but organizations should look at what is best for them.

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## Main Theories

Just as there are multiple approaches toward HRM, there are various theories and perspectives that have emerged from multiple disciplines (including psychology, organizational management, sociology, leadership, etc.) and from scholars of different backgrounds to provide theoretical insights or provide practitioners with models for the practical application of HRM in the organization (see also Boselie et al. 2001; De Lange et al. 2019; Kaufman 2014).

In accordance with Delery and Doty's contingency theory (1996), mentioned by Boselie et al. (2001), factors such as firm size, age of the firm, the use of technology, the intensity of capital, the extent of unionization, ownership, sector, and site determine which HRM policies will work and which will not. This theory assumes complex relationships between the HRM variables themselves, between HRM variables and key output measures, between HRM variables and contingencies, and between output and contingencies. HRM can only be effective if HRM variables are coherent with other dimensions of the organization and with the external context (e.g., Boselie et al. 2001). Following the contingency theory, a "one-size-fits-all" perspective is not suitable since the effect of HRM policies depends on both the external and internal settings in which they are applied (Boselie 2014).

The configurational perspective is according to Delery and Doty (1996) somewhat similar but adds complexity. This perspective claims that the closer an organization's HR practices are to the appropriate prototype model (for organizational

strategy), the stronger the success. For example, processes in the automotive industry are indicative of the configurational viewpoint (MacDuffie (1995), in Boselie et al. 2001).

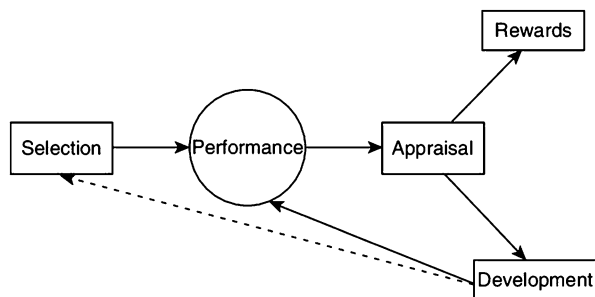
In a more universalistic view to HRM, on the contrary, terms such as “best practice” and “high-performance work practices” are central (Boselie et al. 2001). This theory states that (1) that there is a linear correlation between HR practices and organizational success, (2) that the best practices are generalizable and effective, and (3) that organizational success is best quantified in terms of key financial metrics such as profits or in terms of market share and sales levels (e.g., Pfeffer 1994; Huselid 1995). This perspective implies that HRM has a direct effect on organizational performance, whereas contingency theory suggests interactions rather than simple linearity (e.g., Harney 2016; De Lange et al. 2019).

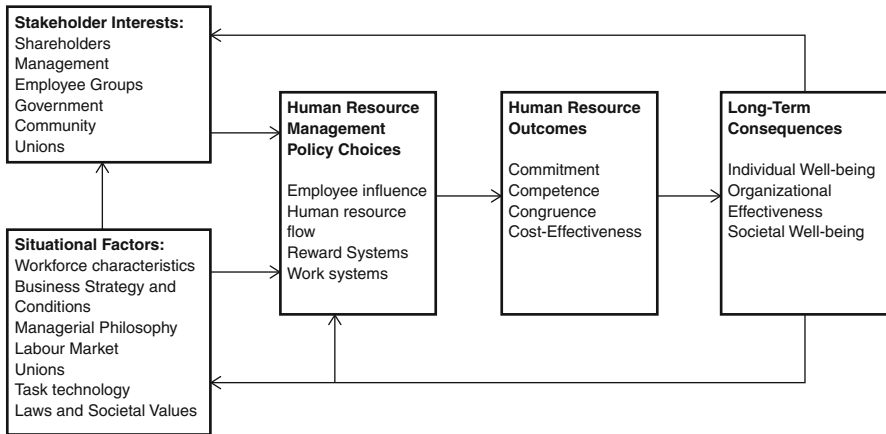
Boselie et al. (2001) state that Guest (1997) distinguishes between strategic theories, descriptive theories, and normative theories. Strategic theory addresses the relationship between extraneous conditions and HRM policies and practices, and it assumes that strategy, policy, and practice are well aligned to achieve the best (Guest 1997). The Michigan model (Fombrun et al. 1984) is an example of such a strategic model (see Figure 1). According to Guest (1997; in Boselie et al. 2001), strategic theories are too simple in describing HRM; they are not strong in detailing the underlying process that associates HRM with performance and are too focused on economic aspects such as profit.

Descriptive HRM theories (e.g., Harvard model by Beer et al. 1984; Kochan et al. 1986; De Lange et al. 2019) on the other hand attempt to extensively describe the scope and categorize inputs and outputs in an open system framework. The Harvard model (see Figure 2) is based on the human relations school and concentrates on team work, communications, and individual talents (associated with the so-called soft method). While the descriptive approach is a realistic one, it lacks a clear link between HRM and organizational performance, stated by Guest (1997).

Finally, normative theories tend to be more prescriptive in their stance, arguing that enough knowledge exists to form a basis for a prescriptive best practice or that a range of values specifies the best practice. However, these models concentrate primarily on the internal features of HRM and neglect the broader organizational strategic aspects (e.g., Guest 1997; Legge 2005; Pfeffer 1994).

**Figure 1** Overview of the Michigan model: The Human Resource Cycle (source: Fombrun et al. 1984)





**Figure 2** Overview of the Harvard model: Map of the HRM Territory (source: Beer et al. 1984; Figure 2-1, p. 16)

## HRM in Different Contexts: Two Models of HRM in Practice

Globalization and international cooperation have made it increasingly clear that different countries can have different methods and perspectives regarding HRM. Partly because of this and the development of HRM as a theory, it is understandable that there are also differences in how HRM practices are applied in countries and continents (e.g., Boselie 2014; Dessler 2021). The degree of attention to those differences, and the conclusions drawn from them, is in part a matter of conceptual approach to the topic as there are significant conceptual differences between HRM practices within countries (China and Japan, the USA, the UK, and European countries). They vary in business environments, organizational structures, motivational programs, communication strategies, and culture (Dessler 2021). In this chapter, we only discuss the differences in HRM between the USA and European countries (Research on HRM developments and HRM applications in practice in Asian countries is also relevant, but is beyond the scope of this chapter and deserves a separate article.).

With respect to the different views on HRM practices and the various objectives of HRM studies in the USA and Europe, respectively, most authors juxtapose two models of HRM: the European, German, or Rhineland model (dominant in European countries such as Germany, the Netherlands, the Scandinavian countries, Switzerland, and Austria) and the US or Anglo-Saxon model (dominant in the UK and the USA), in which a variety of stakeholders is important (e.g., Albert 1991; Brewster 1995).

The Rhineland model has its roots in continental European thinking, and for European researchers, HRM has many more stakeholders, so the concept of stakeholder is widespread in Europe and the many stakeholders are committed to HRM



issues. It differs from the Anglo-Saxon model, because it has its basis in a socio-economic system that is rather different from the Anglo-Saxon one, which is more based on deregulated market-led capitalism and aims at a variety of shareholders (Brewster 2007).

Europeans have often criticized the focus of HRM in the USA which tends to be more corporate (see, e.g., Brewster 1995; Legge 1995). Most studies in the USA on HRM analyze the organization or in some situations the sub-organization (e.g., the financial unit). However, HRM in European countries is understood more broadly, and the work of HR specialists, the trade union movement, national legislation and labor markets, and institutional and cultural differences are not perceived as exogenous influences but as part of HRM issues (e.g., Brewster 2007). HRM can be implemented and analyzed at various levels, and it is not only about the organization but also the HRM policies of the European Union (EU), for example, or certain sectors or public authorities have the attention in scientific discussions. Within the EU, national governments have to deal with reducing unemployment and promoting work flexibility (see, e.g., Dessler 2021; Porter 1990).

In the Anglo-Saxon model, the emphasis is on the individual, and there is a limited sense of community. The emphasis is on goal rationality, while in the continental European model, the emphasis is much more on communality and collectivism than on the individual. Also, in the Anglo-Saxon model, there is a less developed legal basis on which organizations that want to cooperate can trust each other. According to the American model, people operate in an atmosphere of distrust when it comes to relationships between organizations. This is in contrast to Europe where a more elaborate legal system exists. This legal system is based on common principles, and loyalty, reasonableness, and fairness are important aspects (e.g., Boselie 2014; Brewster 2007).

Another difference is that there is more emphasis on the concept of people, planet, and profit in the Anglo-Saxon model. Financial parameters are often leading in this model (Boselie 2014). In relation to this, the American perspective assumes a shareholder perspective and therefore focuses more on the profits of the organization. With respect to organizational profits, the US model has lesser consideration for other stakeholders such as customers, national government, local government, employees, line managers, top management, and unions, whereas in Europe working communities have broad support for unions and other forms of employee representation in their workplaces, although the extent of this varies from one country to another (e.g., Brewster 2007; Communal and Brewster 2004). In some countries, the right to join a union to protect one's professional interests is taken for granted, and in recent decades, the number of countries recognizing unions has increased (Heinecken 2017).

The focus on profits in the American model can be considered "short-termism," while the Rhineland model has a "long-term" approach, based on institutionally controlled markets and a stability in the relationship between firms and their banks, and is under less pressure from the Anglo-American short-term financial system (Sibbel 2017). A short-term emphasis also plays a role in innovation, and the US model focuses primarily on high-risk innovations. Countries with liberal economies

and high-tech industries such as corporate finance, telecommunications, biotechnology, and computer software experience significant innovations (e.g., Brewster 2007; Hall and Soskice 2001). In contrast, the Rhineland model concentrates much more on long-term projects, such as the development and implementation of improving innovations. At the same time, the introduction of such innovations is effective in long-term production technology, equipment, and goods. This includes intensive involvement of company employees and other stakeholders.

In terms of responsibilities and governance perspective in the Anglo-Saxon model, there are also more hierarchy and detailed plans that must be meticulously executed. There is often centralization of responsibilities in the planning and control process. There is an emphasis on control and rationalization of processes consisting of a standardized, routine, and “one-size-fits-all” method (e.g., Boselie 2014; Rosenthal 2000). This model has traditionally embraced more the theory of “management’s right to manage,” while in Europe, the work council will normally have some degree of power in management decision-making (Brewster 1995).

In contrast, the European system is based more on coexistence and cooperation in society, with an emphasis on revenue sharing. Consequently, European organizations often have decentralized responsibilities and powers, with an emphasis on cooperation between different organizational units. Teams, team building, and a high degree of self-regulation in teams are central. Recruitment is based on the qualities of managers, and the qualities of staff are also important. The European model also pays more attention to absence rate, engagement of personnel, motivation, job satisfaction, trust among personnel, personnel turnover, and the work atmosphere (e.g., Boselie et al. 2001; Boselie 2014; Dessler 2021).

The Rhineland model that emphasizes labor relations and personnel issues can still be considered the prevailing European model – although there are Anglo-Saxon influences emerging in Europe (e.g., Dessler 2021) – in which there are both EU directives (laws) and national labor laws to which companies must adapt their HR practices. This means that there are also differences between European countries because although the directives are binding on all member states, each country can implement them as deems appropriate (Dessler 2021). For example, some laws on severance pay are applied differently in European countries, and sometimes the guidelines are the same. In the Netherlands, employees on permanent contracts receive 1-month’s salary for each year they have worked when fired, while in the USA or the UK, it is very easy to fire an employee because the legislation is different (e.g., Dessler 2021; Sibbel 2017). In Scandinavian countries, there is more respect for the individual and more of a holistic and humanistic approach, where trust and care for people are central compared to other European countries. Therefore we can state that European companies are much more constrained by national policies and legislation on working hours, minimum wages, and public holidays, whereas in the Anglo-Saxon model, there is less government interference and legal oversight, and there is more emphasis on freedom and flexible work practices, in line with the strong culture of private entrepreneurship in the USA (Boselie 2014; Dessler 2021).

Finally, there are differences in the perspectives of personnel evaluation between the European and US models. The evaluation of personnel must be done in an

unbiased way, with management emphasizing the measurable aspects when setting goals and assessing performance (e.g., Boselie 2014). Assessment and appreciation within the American culture are traditionally more performance-oriented, and employees are therefore accustomed to being evaluated on their output. The performance management and reward system in the USA has long reflected this: it establishes strict criteria and targets linked to group and individual performance, focusing primarily on productivity or financial performance indicators (e.g., Pfeffer 1994; Huselid 1995). In Europe, the evaluation systems are usually not so competitive (e.g., Boselie 2014).

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## **Organizational “Fit” and Best Practices in Military Organizations**

The above implies that the HRM approach of an organization should also be consistent, at least to some extent, with domestic norms and values regarding the employer-employee relationship. An organization’s strategy not only influences which HR policy should be adopted; however, existing HR policies also determine which strategies are feasible – and which not. According to the strategic fit, there is no right action, but rather what is best should be considered for each organization. A successful approach can only take place if people also change their attitudes, behavior, and cognition. This requires good and flexible management of employees, also in the military. In 1997, for example, the US military, HRM system was primarily designed to motivate personnel through conventional personnel management processes (promotion selection, retention screening, evaluation, mainly extrinsic individual rewards, and a strong hierarchy). A study in the USA demonstrated that more differentiation was needed to react and adapt to external factors to optimize the “fit,” and therefore it was recommended that the powerful system of intrinsic rewards and motivation not be undermined by hierarchical authority (Robbert et al. 1997). Also in the Netherlands armed forces, the flexible HRM system was recently found to be not so flexible at all when it comes to flexible working arrangements and retention of talented personnel, because many personnel leave irregularly and there are many vacancies (Ministry of Defense 2020). The system is no longer a good fit, given the contemporary external and internal challenges facing the military.

Thus, different scenarios for the future of the military have different implications for HR policies and instruments, such as recruitment, development, professionalization, and outsourcing. Factors to be taken into consideration include (1) society’s norms and the public responsibilities of the organization, (2) governmental pressure and expectations regarding HR policies, (3) legal responsibility of the organization and the privileges of its employees, and (4) situation in the local labor market, e.g., the degree of labor mobility and the potential of new staff on the labor market (e.g., Boselie 2014). At the background of all this hovers the question what it means, as far as personnel policies are concerned, to be a publicly funded and politically controlled organization. The approach that stresses the importance of consistency to an organization’s strategy and environment is sometimes characterized as a high-performance approach (Boselie 2014).

Some authors, however, believe that what works and what not is by and large independent from such external factors, favoring the best practices, or “one-size-fits-all” approach instead. This is then called the high commitment approach. In his *The Human Equation: Building Profits by Putting People First* (1998), Jeffrey Pfeffer identifies seven best practices that will benefit every organization. These are:

1. Sophisticated selection
2. Extensive training
3. High wages linked to organizational performance
4. Team working and decentralization
5. Communication and information sharing
6. Narrow status differentials
7. Employment security

Seeing that some scholars claim universal validity for these practice, an important question is, of course, to what extent militaries in fact can implement such “best practices” that have been mostly developed in the civilian sector. Interestingly, it seems that most of these practices (practice 6 is the obvious exception) are – or were until recently – present in most military organizations. However, most militaries have adopted these best practices because they suit the organization’s strategy and they are related to a high-performance approach and a high commitment strategy. The strategy of the military requires highly committed employees. In practice, adopting these best practices has led to most militaries resembling an internal labor market (ILM) (Baron and Kreps 1999). This means that external recruitment is mainly used for entry-level jobs and senior positions are filled by promotion from within the company. Internal labor markets reduce recruitment and training costs, especially in organizations where many organizational and job-specific skills are required. Moreover, an internal labor market creates loyalty and commitment among personnel (Baron and Kreps 1999). In general, such internal labor markets are better suited for stable environments than for dynamic environments, and we see that, as the result of a changing labor market and a more dynamic environment in general that pose new challenges for the military, militaries have come to adopt HRM policies that are at odds with the principles of an internal labor market. From a training perspective, the longest possible contracts are best. Shorter contract are better for financial and operational reasons. The latter reasons are now deemed more important.

In relation to contracts, training perspective, and the best practices in dynamic environments, it is also important to mention that HRM policies and practices can gain by organizational learning. Organizational learning is an ongoing cycle of improving organizational structures, processes, and practices to reflect new knowledge, insights, and experience that enable organizations to increase performance and adapt to changing conditions (e.g., Cummings and Worley 2015; DiBella and Nevis 1998).

Learning organizations have the ability to learn how to change and continuously improve themselves. In a learning organization, employees take responsibility for changing the organization and learn how to do it better. Organizations built to change

include strategic processes, design elements, and managerial practices that effectively support change and allow the organization to respond to a rapidly changing environment (e.g., Cummings and Worley 2015). Therefore it is important for HRM professionals to be able to identify, acquire, and share information to promote learning among employees and create a culture of continuous improvement (e.g., Cummings and Worley 2015). Especially for the military, this is very important; armed forces must be able to analyze, assess, and respond to rapidly changing operational conditions. To do this, they must ensure that their personnel are adequately trained and up to date. In the military context, organizational learning is emphasized by learning models that relate, for example, to the best practices or lessons learned (e.g., Dyson, 2021). In general, learning models involve exploring and collecting data from both external and internal sources, holding an open dialogue to exchange different perspectives, and then applying the new knowledge to create solutions to problems.

Although there are interesting discussions on the organizational learning aspect in military organizations (see Hasselbladh and Ydén 2020, 2022; Soeters 2020), it is evident that the armed forces must continually use new techniques of adaptive learning to improve personnel policies, decision-making, and adaptiveness to the changing environment.

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## **HRM in Military Organizations in Practice: A Comparison Between Countries**

The variance in HRM methods in diverse countries in general and the best practices in military organizations, as described above, have an impact on the everyday HRM practices in contemporary military organizations. The differences between the HRM systems of military organizations of different countries have been the subject of many studies in the UK, the USA, and, to a minor degree, continental Europe (e.g., Boselie et al. 2001). Understanding these perspectives is vital in developing effective HRM policies and practices for military personnel. HRM policies and practices of today are based on the developments the military has experienced in various countries.

Mittelstadt's research on the welfare state and HRM in the US military (cited in Olsen 2016) considers the historical development of these systems and their impact on military personnel and their families. A welfare state refers to a government's provision of social services and support to its citizens, usually through programs such as healthcare, education, and housing. Mittelstadt (2015) argues that the welfare state and HRM in the US military have evolved significantly over time, reflecting changes in political and social attitudes toward the military and the changing needs of military employees and their families. From 1940 to 1973, all able-bodied males between the ages of 18 and 25 in the USA were required to register with the selective service so that they were available if needed (Zubova 2021). From 1973 there were such a large number of volunteer recruits available that conscription was abolished (e.g., Zubova 2021). These volunteers were recruited and retained by providing their

families with various benefits, services, and support mechanisms (e.g., health care, housing allowances, educational and retirement benefits). These benefits were previously limited to officers and career personnel but were later extended to subordinates for recruitment purposes (Mittelstadt 2015). Today, the US military still offers various benefits, including signing bonuses, healthcare plans, housing allowances, educational benefits, retirement plans, and other incentives to attract personnel.

Some European countries also (recently) have an all-volunteer army. On the other hand, some Western countries have reintroduced conscription – but now in a more inclusive variety. For example, Sweden has reintroduced conscription from 2017 (Persson and Sundevall 2019), now also for women (but on a voluntary basis) mainly due to the threat from Russia but also because it welcomes a growth in the percentage of women in the organization. Overall, the number of women in European armed forces is still between 8% and 15% (Manigart et al. 2018; Persson and Sundevall 2019; Resteigne and Manigart 2021). Dutch conscription for women was initiated in 2021, although conscription itself is still suspended, as it has been in the Netherlands since 1997. In practice, this means that conscripts are no longer called up for military service. But every young person (aged 17) still receives a letter at home stating that the person is subject to military service (e.g., Quanjier and Kok 2020; Zubova 2021). Other countries in Europe that have compulsory military service are Cyprus, Denmark, Estonia, Finland, Austria, and Greece (Zubova 2021).

As mentioned previously, the general US HRM perspective centers on the profits of organizations, with little or no concern for other stakeholders such as unions, while in Europe unions are quite normal. This also applies to military unions. Due to the abolition of conscription in several countries which has often been accompanied by major budget cuts, the total number of military unions has expanded in recent years. The emergence of military unions in a country also depends on factors such as its history, culture, politics, and external threats (e.g., Heinecken 2017). The purpose of unions is to ensure the well-being of military personnel without undermining military effectiveness or national security. Thus, dissatisfaction and uncertainty among military personnel about declining budgets and status in society, changing employment contracts are important reasons for the formation of unions. Social developments also play a role, such as changing culture, individualism, changes in acceptance of authority, and recruitment issues (Heinecken 2017). Today, military personnel are already accustomed to unionization and see the military as a job rather than a vocation.

In the UK and the USA, military unions have long been thought to disrupt military discipline and obedience and to be incompatible with the main mission of the armed forces: to protect the internal and external security of the nation. Unions would undermine the chain of command and the *esprit de corps* by creating an “us versus them” situation (Heinecken 2017; Mittelstadt 2015). This was refuted by the Netherlands, Belgium, Germany, Austria, Norway, Finland, Switzerland, Sweden, and Denmark; these are countries with a long history of military unionism (e.g., Heinecken 2017; Hummel 2015), and they regard a job in the military as an “ordinary” profession, in which military personnel stand up for their own interests.

Military personnel are therefore increasingly regarded as “citizens in uniform” (e.g., Hummel 2015). Military unions are forbidden in the UK, the USA, Spain, Portugal, Italy, France, Turkey, Greece, and Canada. In the UK, for example, military personnel are free to join civilian unions. Also, in France and Italy, alternative (internal) structures have been set up to address the grievances of military personnel, and an increasing number of countries, including Spain, Portugal, the UK, and the USA, are allowing military to form professional associations, but not unions (e.g., Caforio 2018; Hummel 2015).

The recruitment process in European countries for both voluntary and compulsory military service is generally centralized, with strict medical and fitness requirements, while the USA takes a unified approach and relies on advertising and incentives to attract potential recruits. The US military has a rigorous selection process with aptitude tests, physical fitness, and background checks, but with some flexibility to meet the needs of each individual military service (Centralized Selection Process Guide 2021; US Military 2018). Applicants undergo extensive interviews, medical examinations, and security screenings before being selected. Comprehensive training and development programs have been developed to enhance skills and knowledge and improve job performance. While the US military focuses more on vocational training and leadership development, European forces typically emphasize formal education, language training, and cultural awareness as part of their career development programs. They also offer more opportunities for international assignments and exchanges, while the USA emphasizes combat readiness and combat experience (e.g., US Military 2018).

The US military has a robust performance management system that sets clear expectations and includes regular evaluations, feedback, and recognition for outstanding performance. Performance reviews are used to determine promotions, rewards, bonuses, and disciplinary actions and include a rating system and rewards for exceptional performance (Boselie 2014). In European countries, the emphasis is more on collectivity in terms of rewards, and leisure and work-life balance seem more important than the desire to earn more money (e.g., Boselie 2014).

Military salaries and benefits vary widely within the EU, depending on national policies and economic conditions. In general, European militaries offer lower salaries but more generous social benefits, such as health care, housing, and pensions. In contrast, the US military offers competitive salaries and benefits, but these can vary depending on rank, years of service, and duty station.

The US military and European militaries recognize the importance of work-life balance and, as already mentioned, offer various programs to help their personnel. These programs include family support services, child care, counseling services, and leave policies. Employee relationships are important for a positive work environment. European military organizations have established policies to promote ethical behavior, diversity, and inclusion (e.g., Reis and Menzenes 2019), having made significant progress in recent years in promoting diversity and inclusiveness (e.g., Reis and Menzenes 2019). The US military is also committed to diversity and inclusion but faces challenges in implementing reforms, particularly around sexual harassment and assault (e.g., Reis and Menzenes 2019; Yeung et al. 2017).



In conclusion, HRM practices in the military are fundamental to promoting an effective and efficient organization. The military invests heavily in recruiting and selecting potential candidates, training and development, management of performance, the compensation process and benefits, and work atmosphere and employee relations. These practices help ensure that personnel are ready for their jobs, can perform at a high level, and remain motivated and engaged.

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## Challenges for Today's Military Organizations

In general, the differences in HRM in practice between contemporary European military organizations and the US military are largely a result of their respective historical, cultural, and political contexts and subsequent HRM perspectives. However, both continents face similar challenges in terms of labor market trends, technological developments, trends in training and education, workforce diversity, and the employment of external contractors. In light of these challenges, militaries have to turn to new methods of recruiting and retaining their personnel. For those countries practicing general conscription, the recruitment of military personnel is relatively straightforward; personnel shortages are met by temporarily incorporating more conscripts (Moelker et al. 2005). What is more, conscription brings a large number of young men (and sometimes women) in contact with the military. Earlier, however, we mentioned that many societies abolished conscription in light of the changed security situation after 1989, which in turn led to missions far away instead of defending one's own territory. Such a strategy shift affects HRM policies: in general, it requires a smaller but better educated all-volunteer force. Familiarity with the armed forces among young people has subsequently dramatically decreased in many societies (Moelker et al. 2005).

In an all-volunteer force, the military organization has to do much more in order to find qualified and motivated personnel (Moelker et al. 2005). To that end, a military organization composed of volunteers must compete with other (civilian) organizations to obtain a good and more talented work force. In view of the importance of the organization's reputation, labor market communication is now more important than it was in earlier days (e.g., Op den Buijs and Van Doorn 2023; Thelen 2020). Military organizations have to find ways to present themselves as an employer that has something to offer to potential talented employees: interesting jobs that offer varied tasks and challenges in a dynamic environment, possibilities for study, and attractive and competitive conditions of employment (Moelker et al. 2005). Another important challenge concerning the labor market is a shift in motivation of young people to seek job opportunities in the military.

## Motivating Young People

As a result of these trends, there are in many societies an insufficient number of young people available on the labor market to fill the organization, and this is



worsened by the fact that the willingness of young candidates in the labor market to opt for a job in the military has decreased in recent years; apparently, the military does not always offer the kind of jobs young people today are looking for. Traditional motivators such as salary and other benefits are no longer the most important factors. More important are a good work-life balance and options for training and development. In addition, young people mention “a good work atmosphere,” “helping other people,” and “working with diverse people” as specific motivating factors, while the military’s image partly depends on offering equal opportunities for men and women (Manigart et al. 2018; Moelker et al. 2019; Rones 2017; Op den Buijs and Van Doorn 2023). While patriotism used to be a very important reason to join the military, recent studies show that young people today generally score low on patriotism as a motivating factor (Manigart et al. 2018), with women scoring significantly lower than men (e.g., Op den Buijs and Van Doorn 2023). Nevertheless, we see that in certain situations, such as the war in Ukraine, patriotism can suddenly flare up again and temporarily lead to more enlistments in the military (e.g., Ministry of Defense 2022).

Other changes relevant to the labor market include rising levels of education (leading, for instance, to more highly educated women), the loosening ties of employees with a particular employer together with an increased labor mobility as a result, changing employment relationships (Buchanan and Huczynski 2019), and the deliberate search for a balance between the work and private life, especially in a context of peace. This work-life balance is of concern of the new generation of young people. Women have a preference for part-time work, especially when they have children (e.g., Salladarré and Hlaimi 2014). This is also important for partners of military personnel, but also vice versa, because we see more and more differently composed families. The career of women has become more important, and there are families with two military parents who have to take turns going on mission. This, as well as the missions they have returned from, can be a burden to the family (Moelker et al. 2019). A subsequent mission can be a barrier for military women and men alike when they have caring responsibilities for children, and this may even be a reason to leave the military organization (Andres et al. 2011; Vuga and Juvan 2013).

In the end, the staffing of military organizations depends on the circumstances and fluctuations on the labor market to a certain extent, and dealing with unpredictability is the main challenge military planners face. Reliable and timely information about supply and demand on the labor market is therefore of vital importance. That is why military organizations have to keep a close eye on their position on the labor market. To be effective in this, military organizations must invest not only in labor market communications but also in data or workforce analytics (big data) – something that is already happening – to find the personnel and to improve the training and development of their talent (Tsai et al. 2015; Buchanan and Huczynski 2019). New effective and efficient ICT systems can help in providing rapid, measurable benefits on qualities of motivated personnel and readiness of the armed forces (e.g., Buchanan and Huczynski 2019). These conditions are important for workforce analytics, and of course there are ethical issues involved, such as employee data privacy. There are concerns that data on qualities

and motivation of personnel can lead to a breach of privacy. Legislation in Europe such as the General Data Protection Regulation (GDPR; European Commission 2018), for example, covers all data processing (such as input, data transmission, output, stored data) and should protect employees and organizations. Military organizations must be careful and transparent when analyzing, storing, and securing personal data in HRM systems (e.g., Hamilton and Sodeman 2020; Tsai et al. 2015).

## Talent Management

In some parts of the organization, military personnel will become a bit more like civilians wearing a uniform, as said before. The work in the military has become increasingly technological in recent years – think of the use of drones, new weapons systems, but also developments in the field of cyber and artificial intelligence – and this requires a different kind of qualified personnel. In other words, the military needs “talents” for all kinds of technological and technical jobs, but we see this development in other civilian companies as well, and everyone is fishing in the same pond of potentially qualified personnel (for more on this “war on talent,” see Soeters 2020). In the labor market, it is hard to find workers with exactly the skills and qualifications that the military needs. And if employees are found and hired, it is vital to find ways to retain them and make the most of their talents. This refers to strategic talent management, which ensures that the necessary talent is attracted, retained, developed, and motivated to work toward the organization’s strategic objectives (e.g., Boselie 2014; Efron and Ort 2010).

Talent management aligns individual capabilities with the needs of the armed forces and optimizes human performance and engagement (the best soldier at the right position at the right time). It integrates acquisition, development, employment, and retention strategies. HR departments have an important role by developing and implementing training programs, providing coaching and mentoring, collecting feedback, and measuring results of the talented employees within the organization. For example, the US army personnel system provides a more personalized management system that could help motivate and retain young people and better prepare them for leadership roles (Arnold 2015). Also, the Netherlands armed forces are gradually implementing a new HRM system to be completed by the end of 2024 that focuses on talent management and considers the employee’s needs and talents by offering career perspectives both on the internal and external labor markets (Ministry of Defense 2021).

In earlier days, military organizations, as described, were internal labor markets where personnel were trained internally and on the job (Baron and Kreps 1999). For military organizations, however, the focus has shifted to an external labor market due to various environmental influences, with personnel management becoming much more important than it was. It is also more important than ever that personnel policies are in line with societal norms (e.g., Boselie 2014). This is above all important when dealing with personnel that for whatever reason have to leave the military organization; the old idea that a military career is a career for lifetime is no

longer true in many countries. This is one of the reasons why militaries increasingly offer new military personnel the chance to acquire more qualifications than are needed just for military purposes. As Moskos et al. (2000) stated some time ago, the military profession increasingly resembles other occupations in many ways.

## Diversity and Inclusion

The trends described above make that military organizations have to ensure that there is enough interest among potential qualified recruits to work for the military. And for many militaries, it is vital right now to find these talents because there are many vacancies in Western militaries (For example, in 2020 there were 9000 vacancies in the Netherlands armed forces out of a total population of 54,000 working in the armed forces; the outflow of military personnel was greater than the inflow (CBS 2021; Ministry of Defense 2019)). Due to the described demographic trends on the labor market, many Western military organizations, for example, are not only transitioning to talent management but also toward attracting and retaining diverse groups in the military organization (minorities and women; e.g., Manigart et al. 2018), and the focus is also shifting to increasingly scaling up with reservists or working with external contractors of companies.

In most societies the most notable trend is that the contribution of women to the labor market is on the increase (>50% women; CBS 2021), and militaries have to adapt to, and benefit from, this changing situation, not only because of the personnel shortages that many militaries experience but also because of legal and societal pressures. There are also operational reasons for employing diverse groups. Interaction with the local population of host countries may be easier because women and minorities have a different approach in this regard, which can lead to advantages in operational situations (e.g., King 2021; Richardson et al. 2011). Not surprisingly, there is a positive relationship between all-volunteer forces and the participation of women in military organizations. A study by Carreiras shows that the “representation of women is higher in countries that have voluntary systems of military service or consider transition from conscript to all-volunteer forces and face actual or potential recruitment shortages. Inversely, countries based on conscript military systems and no recruitment difficulties tend to have the lowest representation of women” (Carreiras 2004: 229).

To incorporate more diverse groups into the armed forces, the groups must be fully accepted and integrated into the organization (Bosman 2008; Richardson et al. 2014; Richardson et al. 2011; Yeung et al. 2017). Military organizations have recently accepted more diverse groups (e.g., Norway, Sweden, the UK, the US; Resteigne and Manigart 2021). In 2018, the first Dutch woman appeared in training in the Marines, and since then women have also been hired in the submarines. This is an encouraging development and may lead to a better acceptance of diversity and a broader recruitment tactic which is good for the image young people hold of the military. The bottom line is that both parties are satisfied when it comes to a working relationship (e.g., Boselie 2014; Graf and Kuemmel 2021).

However, inclusiveness is not just a matter of hiring more members from diverse groups; the culture in the organization (e.g., the tolerance and attitudes of the serving staff) must also change to achieve awareness and recognition of diversity issues (e.g., Op den Buijs and Van Doorn 2023; Spijkers et al. 2023). The management of diverse groups of employees requires an attitude of change from personnel, supervisors, and management. For example, the acceptance of diverse groups in organizations requires different leadership styles and a cross-cultural and gender perspective.

The integration of diverse groups is still a major source of tension in the USA and in some European military organizations because stereotypical gender images among serving military personnel are difficult to break down and to change. These images can lead to incidents of unacceptable behavior. There is some success in reducing unacceptable behavior and incidents in the military, but according to Reis and Menzenes (2019), the incident rate is still too high in the US military and many other European countries, and strong specific policies to prevent this behavior are still lacking.

The inclusion and integration of diverse personnel will not be easy, given the size of the military organizations and the prevailing culture and sub-cultures. Historically, military organizations haven been often the first institutions to implement new developments in management and organization, but in these aspects, there is still a world to win.

## Reservists

Another aspect of diversity and labor market trends within the military context that can be challenging concerns the so-called reservists. In Western countries, given changes in organizational strategy and personnel shortages, they have become increasingly important. A reservist simultaneously performs a military and a civilian function, and the primary role is to be available when the military needs extra troops (Williams 2005). This allows for rapid scaling up or down.

In countries with a recruiting system for the selection of volunteers, reserve forces consist of civilians who maintain their military capabilities through periodic training (Williams 2005). Reserve troops are considered part of a permanent military force, and reserve forces allow a nation to decrease its peacetime military expenditures while maintaining a force prepared for operations. There are a few studies on reservists and their health, readiness, work-life balance, and other dual employment experiences (e.g., Kirby and Naftel 2000; Rein-Sapir and Ben-Ari 2021). HRM activities should incorporate the reservists and deal with their dual employment.

## Private Military and Security Companies

In relation to personnel shortages in the military, another trend is evident: the increasing externalization of human resources through Private Military and Security

Companies (PMSCs). Private companies can be a challenge or benefit to military organizations, and PMSCs have been used for nearly 150 years by various armed forces around the world to solve personnel shortages (Schaub Jr. and Kelty 2016). PMSCs are profitable organizations whose members are paid to execute military or security tasks in conjunction with or for other military units (Schaub Jr. and Kelty 2016). In response to the tight labor market, PMSCs are considered as valuable for providing additional skills and services in peacetime. For example, US forces have contracted with several PMSCs for a variety of national security-related tasks or to provide base security during times of personnel shortages. The armed forces are also more frequently deploying PMSCs in international military conflicts and operations. During operational activities, PMSCs can provide a range of services, from training and logistics assistance, convoy escorts, and catering at military bases (e.g., Schaub Jr. and Kelty 2016; Ranganathan 2016), and since the wars in Bosnia, Iraq, and Afghanistan, it has become quite common for these private companies to be deployed even in core military combat functions.

However, there have also been negative experiences with contractors. For example, British forces were unable to protect their main contractors conveying food and gasoline in Pakistan and Afghanistan, so these companies had to cooperate with local armed security companies, resulting in the deaths of many contractors. This number was even higher than the military casualties in operations TELIC and HERRICK (Cusumano and Kinsey 2016). PMSCs have also raised ethical questions in other operational situations. However, PMSCs do not always have the necessary documents to regulate their activities, and PMSC personnel are not always properly trained; this can undermine discipline, morale, and rules of conduct in militaries (Ranganathan 2016). There are also known scandals and incidents (Ranganathan 2016), such as reckless shooting of civilians, abuse of detainees, as well as sex trafficking and economic exploitation or violations of human rights. Thus, it is important that military organizations ensure that PMSCs operate in accordance with laws and rules in the context of HRM (Cusumano 2016).

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## Conclusion

In this chapter, we outlined the evolution of HRM, its definitions and main theories, and general country differences in HRM and between military organizations and we described some challenges in the field of HRM for military organizations. Many Western military organizations face the difficult task of recruiting qualified personnel in a labor market that is tight (most armed forces today have many vacancies), increasingly diverse, and has an aging population (see also Manigart et al. 2018). Recruitment has become one of the critical success factors. Once the military has succeeded to attract the right people, it must find ways to motivate these employees to excel at their job in a challenging context that puts pressure on their personal lives, without necessarily being able to offer them, for instance, job guarantee in return. Here we must also keep in mind that new developments constantly emerging. The further digitization of HR processes, the constant changes in the labor market and

motivating factors of young people, and the advances in technology (e.g., cyber and artificial intelligence), workforce changes, and the development of more private military companies will continue to pose new tests. From a human resource management perspective, this poses quite some challenges, and some of the most important ones have been outlined above. For more specific information on these and other related topics, we suggest reading the relevant chapters of this handbook. The tasks of the armed forces, meanwhile, place heavy demands on military personnel. Over the years the range of these tasks has broadened, and the areas of deployment have become more varied. The work has thus become more challenging, and the operations military personnel conduct are no longer the same as they were some years ago. Where, when, with whom, under what circumstances, and for what tasks military personnel will be deployed in the future is uncertain.

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# Rationality and Irrationality in Military Organizations

Joseph Soeters

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## Abstract

This chapter delves into a variety of issues dealing with rationality, irrationality, and everything in between, as they occur in military organizations. Respectively, this contribution examines the rationality behind the structure of military organizations, including its room for improvement based on contemporary experiences and insights, such as modular organizing. Next, the chapter deals with the possible McSoldiering of the military and the risk that rationality may turn irrational. Subsequently, the limits of rationality in military decision-making will be examined, after which elements of organizational hypocrisy in military action will be assessed. At the end, the phenomenon of collateral damage as a consequence of military action and the way the military often deals with this phenomenon, are considered. The aim of this chapter is to spawn insights and understanding of the many dilemmas that military organizations face continuously, on and off the area of operations, consciously and subconsciously.

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J. Soeters (✉)

Department of Organization Studies, School of Social and Behavioural Studies, Tilburg University, Tilburg, The Netherlands

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Rationality · Functional/substantive rationality · Irrationality · Organizational structure · McSoldiers · Strategic decision making · Organizational hypocrisy · Collaterale damage

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**Introduction**

As long as the military organization has existed, there has been discussions about the character of warfare and military action. Some say the military is the specimen of rationality in all its facets of planning, the disciplined structuring of activities, and the use of technologies, whereas others tend to stress the emotional, unrestrained, “foggy,” and even short-sided side of military operations. This debate is unlikely to be solved easily, and this is not what this chapter aims to do.

This chapter has the humble intention to delve a bit deeper into matters of rationality, or the lack thereof, in the military. The emphasis will be on aspects that have been uncovered in the field of sociology and management and organization studies (e.g., Soeters 2018, 2020; Soeters et al. 2010). Rationality in this connection is seen as the rational, calculated connection between means and ends, as in cost accounting to compute the price of a commodity, for instance, or in finding the quickest route towards a certain geographical point (Clegg and Lounsbury 2009, p. 126). Rationality in this sense is seen as “logical.” Such rationality is based on a simplified model of reality as it connects means and ends that are close to one another. Although based on such a simplification, such rationality can be highly complex if one thinks of algorithms optimizing missile flights or logistics operations.

As we will see, there is more to say about rationality than just referring to this calculative approach. We will encounter in this contribution: a lack of rationality, irrationality, organizational hypocrisy, and the distinction between substantive and functional rationality. In this chapter, we will deal with all these manifestations of rationality that occur in all sorts of organizations and certainly also in the military and in what the military does. This will not lead to grand solutions that will solve tenacious problems, but it may spawn insights and understanding of the many dilemmas the military are facing continuously, consciously or subconsciously.

The chapter will start with the build-up of military organizations and its consequences for the military job, followed by analyses of the phenomenon of McSoldiering, the possibility that rationality may turn into its opposite, and the character of strategy- and decision-making in the military. After an exposé on organizational hypocrisy, the chapter will end with an analysis of the problem of collateral damage, which is a damage brought to an area of operations without really being intended. In some way, such collateral damage will be rational, in other ways certainly not.

## Striving for Rationality in the Build-Up of Military Organizations

Since time immemorial, the formal military organization has been structured according to insights that may be indicated as rational in the sense that the designers have been thinking intentionally about the connections between means and ends. If victory on the battlefield or the occupation of a city, region, or country are the goals to be accomplished, the military organization should be capable to be stronger, faster, smarter, more pervasive, deadlier, and in general more powerful than the adversary. As such, this challenge looks like the design and construction of a building or a machine, as known the work of engineers, the masters of rationality and analysis.

Therefore, military organizations have been structured like an apparatus, in which every part has its functional and unique significance for the performance of the whole device. Roman armies consisted of legions that were subdivided in 10 cohorts, each consisting of 6 centuries that counted about 80 men each. The legion as a whole counted about 5500 soldiers. The first and largest cohort consisted of specialists such as blacksmiths and construction workers. In addition, there were supporting troops, the so-called “auxilia” that were called upon to provide light infantry, logistical and cavalry support (e.g., Goldsworthy 2009). In such an organizational build-up, rationality is associated with machine-like replacement on a dime, of individual soldiers up to divisions, if this would be required in a given situation.

The highly disciplined character of those forces made them successful for centuries. Yet, the highly structured character of the military gradually disappeared in the Middle Ages, until in sixteenth century there were new attempts to make military action explicitly rational again. For instance, the Dutch troops fighting for the independence of their nation were successful against the Spanish Empire because of their highly rationalized ways of operating (Van Doorn 1975). The invention of the musket made it necessary to standardize operational procedures on the battlefield, in a way the opponent was not used to. First, soldiers were no longer allowed to use weapons of their own, as all muskets were provided by the military. Hence, technology became standardized throughout all infantry units. Second, because recharging the muskets took some time, it was essential to train the soldiers to march backwards in a disciplinary manner after they had fired their gun. Arrived at the back of their units, they could start recharging their muskets and gradually move to the frontline again. Through this rational way of organizing, efficient and continuous firepower was certain because once the soldiers had fired and returned to go to the rear end, the next row would take over. The Spanish troops were highly surprised by this way of operating (Soeters 2020, p. 15).

This is a relatively recent example of rational organizing in the military, occurring after the demise of the Roman Empire. But it surely was not the end of this development, it was only the beginning of bringing science into the military (e.g., Bousquet 2009). The nineteenth century witnessed the beginning of the Industrial Revolution. Engineers became increasingly influential as the revolution was based on the invention and introduction of new technologies. Sciences and engineering

stood at the beginning of their enormous impact in organizations and society (Shenhav 2007), and under this impact, an American practitioner, Frederick Taylor, developed and advocated a way of organizing that became known as *scientific management*.

He claimed that, like technologies and devices, organizations could be designed making use of scientific knowledge instead of relying on the skills and practices of craftsmen. Presented as scientific methods, Taylor conducted experiments to demonstrate how organizations and jobs could best be organized. His findings led him to formulate principles as to standardization of work methods, the structuring of whole organizations, and the training of skills. No longer should work be done on the basis of the workmanship of smiths, welders, shipbuilders, and construction workers because there was too much variance, ineffective habits and subjectivity in what they had learned during their training on the job (Soeters 2020: 11 ff.). From now on, work needed to be done by following precise rules, instructions, and requirements (standards) that were elaborated by work analysts and planners. Planning and doing became separated domains in organizations. In general, Taylorism brings a strong division of labor into the organization, as it favors splitting up the whole of the organizational work into many smaller tasks. Smaller tasks can be executed by people who are specialized in their particular domain of work. Such tasks can easily become routine, in which cases different people can replace each other smoothly, if needed.

Despite resistance by unions and political upheaval about his impact, Taylor became highly influential in the world of business, management, and organizations. The military was also attracted by his insights. The US Navy and Army were highly interested, and through the application of his insights, they were capable of standardizing job instructions and training, hence improving productivity, the quality of maintenance, and even perfecting the use of fire power. Since then, the military organization and the soldiers' job have become Taylorized to a large degree (Soeters 2020: 13 ff.).

Even more than in the times of conscription, today's professional military job is determined by planning, instructions, drills, skills, procedures, standardization, and certification and protocols (King 2013). As an example, today's doctrines and in particular training manuals outline precisely how an ambush can be organized or countered. All this is based on a rational – and in fact acontextual – analysis of means and ends. This way of structuring, training and performing in military work intends to provide:

- More efficiency (doing more with less people and hence less costs)
- More quality (products and services that are ready to use and effective)
- More continuity (easier replacements) and, perhaps most of all
- More safety (preventing injuries and casualties)

Safety to military personnel has become a driving factor in the proliferation of Taylorism in the armed forces, due to the emergence of increasingly impactful weapon systems. After all, working in situations in which one experiences and

uses violence many things can – inadvertently or not – go wrong, possibly hurting personnel and outsiders. Taylorism has therefore found its place in the military. It surely will remain there, in whatever form or manifestation, even if it is called an organization beyond Taylorism or beyond its practical manifestation, Fordism (King 2006).

Despite the preponderance of Taylorism in the military, there are also rebuttals and suggestions for change, at least to a certain degree.

First, Taylorism brings complexity to the organization. As said, Taylorism favors a strong division of labor. In the military, this could be seen in the Roman army as we saw before, but today it is even more discernible in the various specializations armed forces know today: infantry, logistics-maintenance, logistics-transport, information technology, purchase management, schools and training institutions, different units for specific aircraft or weapons systems, units for civil-military cooperation, engineers, etc. This division of labor has resulted in a “complex organization with simple jobs” as it was once aptly described (De Sitter et al. 1997).

Such an elaborated organizational structure has advantages, because specialization provides more competence and efficiency on the job, but on the other hand, there is a lack of flexibility and control. These disadvantages emerge when specific task forces need to be deployed to missions abroad. Dependent on the character of the mission, the task force needs to be composed according to the task ahead. If the mission is more combat-oriented, infantry units supported by cavalry, artillery, and logistics will dominate the task force. If the mission is more aid-oriented or aiming at civil-military reconstruction, CIMIC-units, health-care elements, and logistics and engineering units will be more important. The process of putting different components before deployment together takes a lot of time, energy, and resources. It is the price one has to pay “for a complex organization with simple jobs.” Hence, it may be wise to ponder about different manners of organizing public bureaucracies, such as the military (e.g., Adler 1999). One of such new ways may be modular organizing.

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## Alternatives in the Build-Up of Military Organizations

Modular organizing (Schilling and Paparone 2005) emphasizes the build-up of overall organizations consisting of smaller units that can function independently from each other, yet may function together as a whole (De Waard and Kramer 2008). In navies, the principle of modularity is highly developed, as the organization is built around vessels that need to be capable of operating on their own; on navy vessels, everything and everyone needed is on board. Similarly, air forces consist of units that work around the same type of aircraft such as Apaches or F-35's. Every squadron can function on its own because it has all capabilities available including all the supporting workforce to make a fixed number of aircraft operating.

The concept of modular organizing may be helpful for the army too. It may lead to thinking about the design of independent task forces in which all capabilities needed are available. In this, it makes sense if the army would follow basic design principles that are natural to navies and air forces to render deployments easier and

quicker. The problem, however, is that the army is confronted with such a large gamut of varied tasks dependent on the type of the mission, that it seems hardly feasible to come to a standard type of task force that would fit all purposes. Therefore, the idea of modular organizing, despite its attractiveness, has inflexibilities of its own. The variety of tasks that the army should be ready to do exceeds the number of different task forces that one can organize on a continuous basis. A need to put together elements of different units will therefore always remain.

However, through following ideas of modularity, the degree of such ceaseless combining in armies could be reduced, hence inducing less waste of time and less adaptation problems when a new deployment must be arranged. In such modular task forces, for instance, components dealing with logistics (including the provision of food and health care) will be included in their standard set-up, whereas in the current army, those components need to be “borrowed” from other units when a battalion will be deployed to a mission. This will not solve all problems related to the matching of tasks and organizations, but it will certainly make things easier.

In general, the complexity of the Taylorist military organization, based on the ambition to create as much rationality and efficiency in the individual job as possible, may resonate in longer “production and delivery times,” so to speak. For instance, the purchase of goods is a complex matter in defense organizations, leading sometimes to inadequate or not timely delivered supplies of goods, such as boots, helmets, computers, or even vehicles in the area of operations. The reason is that there are many steps in this process that are taken by different specialists in the organization: identifying the need for certain goods by commanders, acquiring the required resources via specific procedures by purchasing specialists, receiving the goods and getting them on the proper place by logistic personnel, and paying the bills by financial people. Because the process is so elaborated and because so many different personnel are involved – all because it is “rational” to do so – this is a time-consuming and sometimes even annoying process.

This process may become seriously maddening when people on the various spots in the organization hinder each other when they place too much weight on their own rules, interests, and practices. This may occur if personnel – due to the organizational context in which they are employed – focus too much on their own job, because “where you sit is where you stand.” In such situations, one is not really bothered about the larger picture to which their actions contribute. In such cases, the process simply requires too much time, possibly leading to operational personnel not having adequate supplies and equipment in the field, as said before. It is the price one has to pay for rationalization and efficiency-improvements in smaller parts without regarding the rationality in the whole of the organization. Of course, the process of purchasing goods is only one example. The military organization knows endless numbers of such examples.

Reviewing the process of structuring armed forces, one can state that rationality in its calculative, “logical” sense – based on planning and analysis to make the best of means to reach ends – has played a role that can hardly be overestimated. Yet, with an emphasis on one aspect of organizational processes, a lack of attention to other aspects of work configurations may occur. This may become manifest in delays, a



lack of cooperation, unconcern about the total picture of what the organization does, and indifference towards the workers and customers (e.g., Adler 1999). This may have adverse effects. We will be seeing more of this in the remainder of the chapter.

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## McSoldiering in the Armed Forces?

The American sociologist George Ritzer (1993) analyzed the growing dominance of rationality in organizations, for which he took the work procedures of the Hamburger chain McDonalds as the prime example. This fast-food chain stresses that the preserving, cooking, and preparing of their foods are done always and everywhere in exactly the same manner. Personnel in the McDonalds stores all over the world use the same ingredients, the same equipment, the same temperature, the same cooking time, and the same expressions while delivering the orders. A hamburger purchased at one of this chain's stores is identical in Shanghai, New York, Amsterdam, Cape Town, and in all other places on the planet. Standardization is the magic word here; this ensures that workers and customers always know what to expect and that no time, costs, or products are wasted. It is *scientific management* at its best.

Following up on this, Ritzer coined the phrase “McDonaldization of society.” With this term, he wanted to analyze how such organizational processes – striving for efficiency, calculability, predictability (via standardization), and full control – are capable of dominating increasing domains of work and life. These domains not only include business, finance, and food production but also health care, education, and the media. Even medical doctors and nurses need to work according to standards and protocols that have been formulated at some central point. Not complying with these rules, standards and instructions will make the workers lose their professional qualifications, their “licence to operate.” The logic behind this is that not complying with the rules and standards may be detrimental to the patients’ and the workers’ own health and safety, as well as to the general efficiency and costs in the health system. Striving for efficiency fits perfectly well with the current, larger economic system based on market competition that dominates in most countries in the world, albeit with variations.

Military sociologist Morten Ender (2009, pp. 67–86) pursued this line of thinking and raised the question if today’s professional soldiers are McSoldiers, in other words “human tools” such as in the hamburger chain, or the opposite, innovative professionals. His work was based on findings on US soldiers deployed to Iraq. He found that there was no clear answer to this question. The soldiers in Iraq of course followed and used all skills, drills, and tactics they had learned in training and exercising at home (e.g., King 2013). This of course leads to predictability and control in operations all over the world, which are positive essentials of rational organizing. Also, junior commanders did not receive a lot of space to make decisions on their own; this again increases predictability and the use of standard operating procedures, which is important to avoid military action getting out of control. On the other hand, such constraints while in action impede flexibility and creativity on the spot. It has been stated before that junior officers, company commanders in

particular, are too rarely given the opportunity to be innovative and make decisions on their own (e.g., Wong 2002, p. 3).

This is not to say the soldiers and their (junior) commanders are not innovative at all. In Iraq, when the rank-and-file and junior commanders were confronted with problems related to maintenance, such as broken equipment and vehicles, the soldiers were apt at making repairs and improving safety conditions. Among others, they were keen on “up-arming” their vehicles as the standard vehicles were not safe enough to protect against IEDs. As such, the soldiers on the ground were certainly also adaptable, creative, and innovative personnel. All in all, the US soldiers in Iraq were both “human tools” and innovative professionals, according to Ender (2009). This will not be any different for military men and women from other countries who have experienced the heat of operating in missions such as in Iraq and Afghanistan.

It remains to be seen, however, if soldierly creativity and innovativeness remain limited to maintenance and repairs at the base or also translates to situations that are more operational, such as in contacts with host-nationals on the streets. After all, soldiers in today’s missions are thrown into situations that can quickly change from hostile, combative engaging to calm interacting with ordinary people who all have their own traditions, beliefs, sentiments, habits, and memories. At the end of the day, creativity and innovativeness during action is likely to have a larger impact on smoothing hostile tensions than being handy at repairing equipment. Given the wide range of different types of operations, stressing *McSoldiering* – i.e., continuous displaying standard, oftentimes conventional kinetic, repertoires of action (e.g., King 2013) – may not always be the best option to solve the tensions and hostilities in a conflictual region. Yet, it proves hard to divert this *McSoldiering* aspect of today’s armed forces. Traditional combat training and its consequential lust for hard war-fighting are simply too strong to be altered easily (e.g., Catignani 2014). This seems to be true despite pleas, arguments and attempts to change the content of military education (e.g., Sookermany 2017) and despite endeavors to introduce exercises that relate to population-centric approaches instead of enemy-centric approaches (e.g., Catignani 2014). Apparently, there is a sort of *dynamic conservatism* in military organizations, which implies that proactive changes only seem to result in remaining the same (Ansell et al. 2015).

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## The Irrationality of Rationality

One of the consequences of McDonaldization, says Ritzer (1993), is that rationality may turn into its opposite; this is what he calls, the “irrationality of rationality.” According to Ritzer (1993, p. 121), rational systems at some point in time inevitably produce inefficiency, unpredictability, incalculability, and loss of control. Even more striking is that rational systems at the end of the day may become unreasonable systems; indifference towards human aspects, i.e., dehumanization, may become an ultimate consequence of such a process. This is more likely to occur if one type of interests is stressed at the expense of the interests of others.

For instance, the interests of the producer and purveyor of services may dominate the interests of the customer (Ritzer 1993, p. 123). Or the benefits of the employers may overshadow the interests of the employees, those of the commanders the interests of the soldiers and sailors, or those of the deployed militaries the welfares of the host-nationals. Higher status occupations and situations in which one has more power in general provide more opportunities to create non-rationalized niches, says Ritzer (1993, p. 179). The rule seems to be that those with power tend to impose organizational rationality – standardization, efficiency, predictability – on others, while keeping one's own work as nonrational, i.e., as not-standardized and not-controlled, as possible. Organizational rationality, hence, seems to have a vertical dimension: more at the bottom, less at the top.

In his work on McSoldiers among US military personnel deployed to Iraq, Ender (2009, pp. 81–82) observed many examples of such irrationality of rationalities. The soldiers in his study complained about unreasonable tasking such as having too little personnel to do the jobs, failing maintenance, reckless assignments, and unreasonable leaders. Such irrationality occurred both on and off the base. Here, the conflict of interests turning rationality into irrationality was based on the divergence of interests between politicians and military personnel, and between commanders and soldiers. Ender's findings specifically relate to what the soldiers, the workers on the ground, feel to be unreasonable with respect to their own work conditions. We will later see how such a conflict of interests – the way Ritzer talked about it – may also refer to the differences in the military's and host-nationals' working, living, and safety conditions and actions.

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## Limits to Rationality in Decision-Making

Another aspect of irrationality, or better perhaps: lack of rationality, in (military) organizations refers to the formulation of strategies, and more in particular decision-making. In a small but illuminative book based on earlier work, James March (1994) explained how decisions happen. One of the most striking parts of the book refers to what he and two co-authors labelled “garbage-can-decision-making.”

In general, March did his utmost best to make clear that decision-making is far less rational than many people are inclined to think. Rational decision-making presupposes that decision-makers have full information and calculation capabilities: in this assumption, decision-makers know everything there is to know, including their own preferences, and they can fully assess the relative weight of each variable in the outcome of a decision-making process. Both ideas are wrong.

Decision-makers usually don't have all the information they need nor are they able to calculate all possible options. That is because they experience the impact of small groups dynamics and more importantly, because they have cognitive limitations and biases, such as an illusion of control and an optimistic bias, related to an insensitivity to prior knowledge and statistical notions. Those are limitations and biases decision-makers share with all human beings (Kahneman 2011). What is more: human beings usually don't strive to obtain maximum results because cultural

rules and institutional conditions such as laws, contracts, policies, habits, and practices prevent this from happening, as these create boundaries and limits to what may be achieved. For sure, decision-making definitively is a matter of bounded rationality.

Having this in mind, March analyzed how decision-making gets complicated when many things happen at the same time and change and interact continuously. Therefore, it is often difficult to connect problems with preferences, preferences with decisions, and decisions with outcomes. All this is a manifestation of ambiguous decision-making or even “garbage-can-decision-making,” as it has been coined so creatively. In such situations, decision-making can be seen as “collections of choices looking for problems, issues and feelings looking for decision situations in which they might be aired, solutions looking for issues to which they might be an answer, and decision makers looking for work” (Cohen et al. 1972, p. 1). In such situations, chaos reigns over rationality because choices and decisions are hardly connected to the problems at hand.

Some may say this perhaps occurs in universities or politics, but not in the military, let alone in military operations. Those people are mistaken. March himself co-edited a volume on military decision-making. In this volume, Weissinger-Baylon (1986) pointed at the fact there are many ambiguities in decision-making that are specific to the military and warfare. Ambiguities in the military relate to technologies as well as to preferences and participation of politicians. In general, military personnel, even among the highest ranks, don’t precisely know what technologies may provoke once being put into action, nor are they fully aware of what politicians in fact want and value. At the same time, during operations, there is considerable decision “load.” The way to cope with such ambiguities is standardization, operational plans, and centralized decision-making.

Yet, this will not solve the essence of the problems. In operations in particular, “solutions are looking for problems,” which happens when military officers don’t rest until they can make use of their specific skills or capabilities and do the job they have been trained for. This could, for instance, be the use of air power as preferred by fighter-pilots or engagements in ground combat fancied by Marines (Hugues 1986, p. 255). This tendency may be rational based on the professional training these soldiers have undertaken prior to their execution. Still such use of force may turn out to be irrational if it, in fact, would create adverse results in the whole of the operations. There are many examples of dynamics making things worse instead of better, the Vietnam War being only one of those.

The above primarily refers to decision-making in military action. More general policy-making about military organizations and their missions shows even more specific characteristics.

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## Organizational Hypocrisy in Military Policies and Operations

Nils Brunsson, a Swedish management scholar, introduced the idea of *organizational hypocrisy* in policy and organizational decision-making. He did so, emphasizing that organizations, and the people in them, in principle are irrational

(Brunsson 1985; Soeters 2020, pp. 215–227). This, of course, was a stone in a calm pond, because in organizations, rationality, if not accomplished, should at least be strived for. However, Brunsson's thinking was not pessimistic, let alone depressive. He stated that for organizations to survive, they simply have to behave irrationally, at least to some degree, sometimes or most of the times.

In line with the analyses provided by James March (1994), Brunsson argues that pure rationality in decision-making is not possible: people are biased and limited in their cognitive capabilities and they adhere to organizational ideologies, or value-systems. Organizational ideologies – sets of cultural rules, so to speak – solve a large part of the decision problem. They focus the employees and other possible stakeholders on just a few aspects of reality, and the employees are committed to the organization's action through these ideologies. As a consequence, members' confidence in their biased perceptions exceeds what seems justified from a rational perspective (Brunsson 1982, p. 42).

Pursuing these ideas, Brunsson (1993) authored a highly interesting analysis of what he framed as *organizational hypocrisy*. He starts again with the observation that organizations are only rarely fully rational. Furthermore, he makes a distinction between decisions and actions, between saying and doing. Oftentimes, he argues, saying and doing are not consistent, put differently, decisions and actions are decoupled. There are two ways in which this occurs.

The first inconsistency – saying something and not doing it – relates to desires, wishes, ambitions, and normative statements that express different values without being a real endeavor to achieve something (Brunsson 1993, p. 491). Such desires and demands may be unrealistic because of a lack of knowledge or simply because one does not have the time or resources to turn them into reality. After all, the most attractive ideas and ambitions may not be the most feasible. The second inconsistency – doing something that cannot be said – is connected to ethics, aesthetics, and truth. In Brunsson's (1993, p. 492) own words: "ethical norms tend to limit what we can say, more than what we can do." People often do things they find difficult to acknowledge and defend in the open. An example is the export of arms. Many nations disapprove of this whereas they make it happen anyway because it helps foster the national economy.

There are two mechanisms to make both inconsistencies work. The first one is *justification*, which is defending or making acceptable of what is being done, or not. Actions should be made obvious and presented as making sense, by stating "there is no alternative" (TINA). Budget cuts on public facilities are often made "obvious," because the "national economic situation does not allow to act differently." This is said while "forgetting" or deliberately not pointing at other options to economize or to gain more income, for instance, via the taxation of private capital gains. The other way is *organizational hypocrisy*, which occurs if it is difficult to justify actions; in such situations, the talk is in the opposite direction of what is being done (Brunsson 1993, p. 501). Then, the official truths deviate from everyday practices.

All of this can be recognized in the domain of military and security affairs. The US government's demand that NATO allies substantially increase their defense budget is certainly connected with their own national weapon industries that can

use every bit of foreign purchases (Dunlap 2011). The justification, however, is that the security situation in Europe, particularly due to Russia's behavior, urges the European allies to strengthen their military capabilities. Organizational hypocrisy, on the other hand, emerges in the same area, when European allies such as Germany, Spain, Belgium, and the Netherlands say they are going to spend 2% of their national income to defense, while they remain far from doing that.

Organizational hypocrisy in higher politics relates to organizational hypocrisy with respect to operations. The Italian scholar Eugenio Cusumano (2019) applied the idea of organizational hypocrisy to the border control practices of the EU vis-à-vis irregular migration across the Mediterranean Sea, offshore Libya. These practices contained a structural inconsistency, starting with their emphasis on the conduct of maritime search and rescues (SAR) operations that intend to help refugees in need on the sea. The use of the words "rescue" and "save" was dominant in the mission's communication with the outside world. In reality, Cusumano (2019) showed, the operations were only limitedly focused on search and rescue, prioritizing border control, the curbing of irregular immigration and anti-smuggling tasks instead. According to Cusumano, there was a clear decoupling of talk and action, hence making this a clear example of organizational hypocrisy. Even though this is to some degree understandable due to the conflicting external demands, such organizational hypocrisy may be detrimental to the credibility of the acting organizations and the objectivity of the assessment of the operations. Besides, moral hazards and dilemmas may arise among the mission's personnel.

Before Cusumano, the Canadian scholar Michael Lipson (2007a, b) had applied the ideas of "garbage-can" decision-making and organizational hypocrisy to one of the military's central activities, UN peace missions. He analyzed the process of decision-making and started with the observation that the UN structurally struggles with conflicting pressures, demands, and views. There are many stakeholders who all have their own views, ideologies, and interests. The UN has to support goals that now and then may turn out to be contradictory, such as defending human rights and recognizing nations' sovereignty. As a consequence, the UN produces talk and decisions more than it solves problems through action (Lipson 2007a, pp. 12–13).

There are serious problems of this type in the context of the UN, one of them being the *commitment gap*. This gap evolves because major military powers such as the USA and the UK are very much in favor of protecting human rights but refuse to participate in peace missions in a way that is commensurate to their military capabilities. They prefer to be involved in allied combat-type missions such as in Iraq and Afghanistan. The same applies to Russia that despite some assistance in peace missions prefers to engage primarily with air operations or secret, hidden yet coercive operations of their own. The contribution of well-funded European militaries has been limited too, at least compared to the contribution by developing countries, such as India, Pakistan, Nepal, Senegal, and Nigeria. Saying one thing while doing the other is what characterizes a lot of major countries' international behavior. Such organizational hypocrisy in the UN also occurs when the problems run out of hand and the use of force seems to be the only solution to the problem that one faces. In such cases, the UN delegates the job of using force to other actors such

as NATO, which happened, for instance, after the failure of the UNPROFOR mission in Srebrenica, Bosnia, in July 1995. This too can be seen as a specimen of organizational hypocrisy (Soeters 2020, p. 223).

All this is not to say that UN peacekeeping is bad per se, or should be ended. On the contrary, peacekeeping contributes a lot to maintaining peace, albeit with limitations, in many places in the world. Organizational hypocrisy and the corresponding limitations in rationality is inevitable to make things work, as Nils Brunsson would say. The world would be worse off without it, no matter how paradoxical this may seem.

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## **Collateral Damage, Functional and Substantive Rationality**

A final point to discuss when reviewing rationality and irrationality in the armed forces refers to the ever-present issue of collateral damage resulting from military action. Collateral damage is loss and destruction resulting from military action that was not intended but taken for granted. If something is taken for granted, it is clear to everyone involved what is appropriate and what is not, and what can be ignored anyway. Underlying ideas are not scrutinized because they are “self-evident” and provide a sort of “mental tunnel”; these ideas differ from one group – or “thought community” – to another (Zerubavel 1997: 35 ff.). In military communities, consequences of combat are often taken for granted, which means they can simply be ignored.

The Polish sociologist Bauman (2011) analyzed this phenomenon, starting with a truism that is popular among military men and women: “you can’t make an omelette without breaking eggs.” Bauman’s subsequent words are too valuable not to be quoted: “What is glossed over in such a case is, of course, someone’s legitimized or usurped power to decide which omelette is to be fried and savoured and which are the eggs to be broken, as well as the fact that it won’t be the broken eggs who savour the omelette. . .” (Bauman 2011, p. 5). And he continues with: “Thinking in terms of collateral damage tacitly assumes a priori an *already existing inequality* of rights and chances (. . .)” (Bauman 2011, p. 5). When hungry, making an omelette seems a rational thing to do, but looking at this from more than one angle, limits to rationality emerge, once again.

A relatively recent example of collateral damage refers to an airstrike by Netherlands’ F-16’s in 2015 on a factory and warehouse of explosives in Hawija in Iraq, killing about 70 people and destructing or damaging some 400 buildings in the direct surroundings (NOS 2020). The damage was caused in particular by secondary explosions that resulted from the bombing. Even though pre-mission analyses had indicated the plan to bomb that specific target as particularly hazardous, the Netherlands’ commander supported by a legal specialist approved the strike. This is only one example of many incidents bringing about collateral damage occurring since the beginning of the missions in Iraq and Afghanistan, and later in Syria where armed forces on all sides of the spectrum were responsible for loss and destruction that “simply comes along with military action.”



There is a major phenomenon that enables such thinking and justifying, and it is related to the build-up of organizations in general, and military organizations in particular. As we saw before, organizations know a strong degree of work division and a corresponding specialization in the jobs because they strive for as much rationality as possible. In air forces this implies that the meteorologist makes sure her weather forecasts are correct, the maintenance mechanics ensure the aircraft is ready to fly safely, planners and other specialists identify the targets and assess *ex-ante* how much damage will occur, and the pilots at the end of the chain conduct the airstrike. All these tasks are conducted in a highly protocolled manner and everyone is interested in doing his or her own job excellently. However, no one questions the broader implications of what is being done. Rarely anyone is interested in seeing the bigger picture.

People involved are interested whether or not the target was destroyed properly (preferably without a lot of collateral damage) and the pilots returned to home base safely. That is rationality, for sure; it is direct-means-ends-rationality, the way we saw before. In sociology, this is known as “ends rationality” or functional rationality. Yet, almost nobody ponders the general impact of such bombing in relation to the dynamics of the hostilities in the region nor in relation to moral or ethical considerations *vis-à-vis* the host-national people. Did the destruction of that target contribute to ending the adversaries and bringing about peace in the area of operations? Such questions are hard to raise as it would create doubts as to what is being done during the operations in a certain area and conflict. Personnel could risk their career perspectives raising such rebuttals. However, this is also rationality, but one of a broader nature; this is rationality that sociologists refer to as “value rationality” or substantive rationality (Clegg and Lounsbury 2009; Soeters 2018, 2020). Clearly, what may be rational from one point of view, may be different, or less so, from another perspective (e.g., Alveson and Spicer 2016).

If public outrage emerges because something seriously went wrong, such as sometimes happens in relation to military operations and their consequences, organizations tend to use a gamut of tactics to forget this act of “corporate irresponsibility” (Mena et al. 2016). The first tactic, of course, is to broadcast a strategic narrative that emphasizes the ideas that military action equals combat and war, and that combat and war come along with a price one simply has to pay. This is the omelette-metaphor we saw before. If this narrative, this tunnel-reasoning, is accepted by the wider population, no “forgetting work” is needed.

In other situations, the organization needs to employ tactics to manipulate stakeholder perceptions, both inside and outside the organization, such as those of journalists and members of parliament. This may happen by diverting attention away from the event, downplaying its harmfulness and distorting the attribution of the blame. If things get worse, tactics are used to silence people who try to raise questions (by ousting, ostracizing and firing them, besmirching their reputation in informal gossip and talks, or simply never have them involved, for instance, by stopping invitations to participate). These tactics are particularly effective if those others act less coordinated, i.e., not strengthening and supporting each other, and if they are unable to express their claims meaningfully. Finally, tactics of “forgetting work” aim at undermining by fabricating alternative stories and explanations, and



sometimes even destroying evidence (documents, physical objects). Sometimes, there is mention of “structural amnesia.”

Of course, such “forgetting work” occurs in civilian affairs, but surely it has been, is, and will be applied to many events that happened, happen, and will happen in military operations. Examples are the notorious Pentagon Papers referring to the Vietnam War (Soeters 2020, pp. 69–70), the Afghanistan Papers that recently came into the open (Whitlock 2019), and the way two subsequent Ministers of Defence in the Netherlands tried to avoid debate in national parliament about the Hawija bombing that was discussed above. In Russia, the “forgetting work” with respect to the demise of a submarine, the Kursk, is another notorious example (Barany 2004). Such “forgetting work” does not help to foster the degree of substantive rationality in the military.

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## Summary

This chapter aimed to produce insights with respect to rationality and irrationality in the military, as well as the various forms in between these two extremes. This contribution does not intend to complicate matters but to make military people aware they are not so rational as they possibly think they are. Rationality is human business and, henceforth, it is surrounded by dilemma's, emotions, habits, divergences in views, and cognitive limitations and biases. What is more, military people “cannot even conceive of a technological object (=military action/JS) without taking into account the mass of human beings with all their passions and politics and pitiful calculations (...)” (Latour 1996: viii). Military personnel need to face the dilemma of combining a broader awareness with the time-pressured technicalities of performing their relatively small operational tasks.

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## Cross-References

- ▶ [Behaviour Economics](#)
- ▶ [Challenges in HRM in Military Organizations](#)
- ▶ [Defence Management and Economics](#)
- ▶ [Dynamic Intersection of Military and Society](#)
- ▶ [Hybrid Organizing](#)
- ▶ [Management, Economics and Logistics in Military Sciences](#)
- ▶ [Military Behaviour and Ethics](#)
- ▶ [Military Design](#)
- ▶ [Military Psychology](#)
- ▶ [Military Sociology](#)
- ▶ [Rationality and Irrationality in Military Organizing](#)
- ▶ [Strategy and Doctrine](#)
- ▶ [The Role of Operational Research in Military Personnel Management](#)

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# Military Spending and the Burden Sharing Debate

Cind Du Bois

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## Abstract

In 2022 worldwide military spending peaked largely due to the invasion of Russia in Ukraine. This paper provides an overview of the world’s military spending over the last three decades where we clearly see an influence of the geopolitical situation on the budgets. On a more theoretical note, models on military spending have traditionally focused on the aspect of burden sharing between allies. By giving a synopsis of this academic literature on burden sharing, we set the frame for a discussion on the current differences in worldwide military spending. We highlight the caveats one should keep in mind when comparing military expenditure data and debating defense burdens.

## Keywords

Military spending · Burden sharing · Defense expenditure

C. Du Bois (✉)  
Royal Military Academy, Brussel, Belgium  
e-mail: [cindy.dubois@rma.ac.be](mailto:cindy.dubois@rma.ac.be)

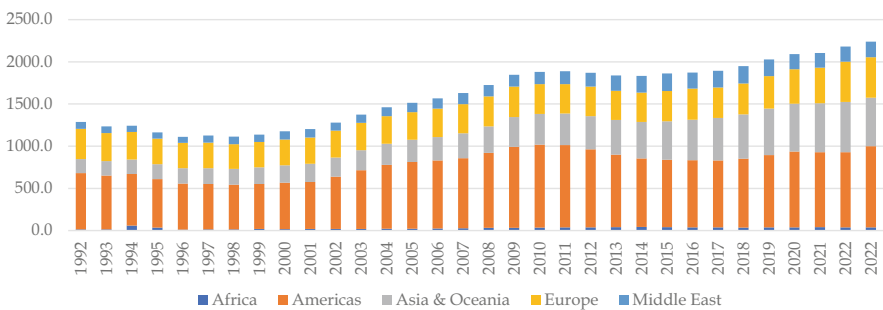
## Introduction

In 2022 worldwide military spending peaked largely due to the invasion of Russia in Ukraine. While the two direct partners involved in the conflict increased their spending significantly (Ukraine by 640% and Russia by 9.2%), also other countries augmented their defense expenditure resulting in a worldwide increase of 3.7% (in real terms) compared to the 2021 numbers (Sipri, 2023). While defense spending of the enemy is an obvious determinant of a country's military expenditure, defense spending of an ally also has an important influence. Depending on the nature of the military spending (having more public or more private benefits) countries can opt to free ride on the spending of other countries. Burden sharing debates are hence nearly as old as military alliances themselves. In fact, since the Cold War, theoretical models on military spending have exactly focused on this burden sharing between allies. First, we will give an overview of military spending data over the last three decades. The second paragraph gives a synopsis of the theoretical literature on burden sharing, while the third paragraph relates the data on military spending to the Gross Domestic Product (GDP) in order to frame the burden sharing debate. In the discussion part we nevertheless highlight the caveats one should keep in mind when comparing military expenditure data and debating defense burdens.

## Military Spending: An Overview

The Stockholm International Peace Research Institute (Sipri) yearly publishes a database covering data on military spending for 173 countries. While for some countries the database goes back to 1949, this is not the case for all countries. Given the fact that for the Soviet Union data is only available from 1992 onward, Fig. 1 shows the evolution of worldwide military spending since this date. The figure is based on expenditure per region expressed in constant (2021) US\$ (billions).

Figure 1 immediately highlights some important findings. First, over the last 30 years worldwide military spending has increased by 69%, i.e. from \$1287.9



**Fig. 1** Military spending (in constant 2021 billion US\$) by region, 1992–2022. (Source: SIPRI Military Expenditure Database (consulted at June 1st 2023))

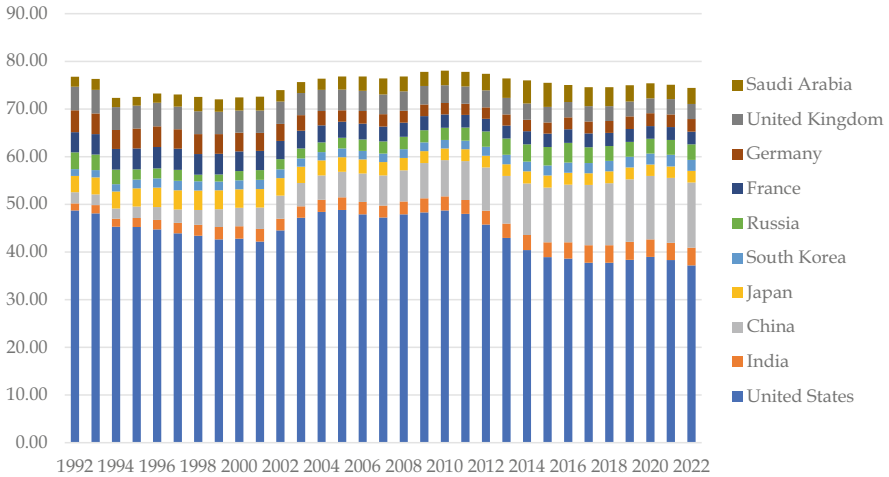
billion in 1992 to \$2181.9 billion in 2022. This increase was unequally divided over the four decades with the first period, from 1992 to 2000, military spending even decreased by 8.5%. This decline reflects the de-investment in military capabilities after the end of the Cold War which reached its nadir at the end of the nineties. Induced by the terrorist attacks on the United States of 11 September 2001, the beginning of the new century indeed saw a new era of increased military spending with yearly increases until 2011. While the growth numbers were largely fueled by increased US spending (war on terror, war in Afghanistan and Iraq), also other countries such as China and Russia started to invest more in their armed forces. The year 2011 was a turning point as total military spending decreased largely due to the effects of the 2008 financial crisis and the budgetary deficit problems in most Western countries. Total world spending continued to fall until 2015 from which it started growing non-stop until today. Again the rise was motivated by rising geopolitical tensions, in case the annexation of Crimea by Russia.

Second, the figure also underlines the uneven distribution in military spending by region. The bulk of the spending is done in America representing about 40% of worldwide military spending. The share of the Middle East always fluctuated between 6.4% and 8% just to surpass the 10% threshold in 2014 and falling back to 8.25% in 2022. Military spending in Asia and Oceania marks a remarkable increase starting with 13% in 1992 to 20% in 2012 to more than 27% in 2022. The 27.7% share of Europe in total spending declined steadily to less than 20% just to arrive back at 21.8% in 2022. Africa is the world's region with the lowest military expenditure with only a few years where its share is more than 2% of total world spending. Off course, these averages by region are often guided by the numbers of some leading countries in these regions. Table 1 shows the ten countries having the highest military spending in 2022. As the table also highlights the share in world-wide spending for each country, it immediately becomes clear that the data on regional spending are strongly dependent on the data from some countries (e.g. US, China, Saudi Arabia, ...).

**Table 1** Top ten countries in terms of military spending in 2022

Rank	Country	Military spending in 2022 (expressed in constant 2021\$)	World share in 2022
1	United States	811,59	39
2	China	297,99	13
3	India	80,96	3,9
4	Saudi Arabia	73,04	3,6
5	Russia	71,98	3,3
6	United Kingdom	69,99	3,1
7	Germany	57,80	2,5
8	France	56,99	2,4
9	Japan	53,95	2,1
10	South Korea	49,62	2,1

Source: SIPRI Military Expenditure Database (consulted at June 1st 2023)



**Fig. 2** Share in world military spending of 10 biggest spenders from 2022, 1992–2022. (Source: SIPRI Military Expenditure Database (consulted at June 1st 2023))

As Table 1 shows, more than 60% of worldwide military spending can be attributed to the 5 biggest spenders where almost 40% is even attributable to one country, the United States. The US remains indeed by far the greatest military spender in the world although the difference with its followers is narrowing. Figure 2 plots the share of the 10 biggest spenders over time.

The most striking element in Fig. 2 relates to the share of China as these numbers show a very steep increase. Chinese data are always to be interpreted with care for the country yearly presents an official defense budget but it is not always transparent and leading think tanks estimate actual spending to be much higher than the official numbers. This leads to different numbers (while SIPRI estimates Chinese military spending to be \$292 billion in 2022, the International Institute for Strategic Studies puts the estimate on \$319 billion (Center for Strategic and International Studies, 2023)). The trend in Chinese military spending is however clear, i.e. whereas in 1992 China merely accounted for more than 2% of worldwide military spending, today the country represents about 13%. Since Xi Jinping came to power, this share has surpassed the 10% level. In fact, military spending by China can be expected to increase even further as President Xi wants to modernize the People Liberation Army (PLA) by 2035 and transform it into a world class military by 2049. In this way, strengthening the PLA forms an integer part of China’s national strategy to achieve “the great rejuvenation of the Chinese nation” by 2049. While more modest in absolute numbers, the share of India in worldwide military spending also tripled over the timespan under study. Due to the increased spending from its neighbor China but also induced by the hostile relationship with Pakistan, India has doubled its defense budget since 2013 (see table) (International Institute for Strategic Studies, 2023). The three European countries in the list share a similar pattern, i.e. France, Germany, as well as the United Kingdom loose share over the last 30 years. While

the three together accounted for more almost 14% in 1992, their cumulative share dropped significantly to less than 10% in 2022. Hence, today the three biggest European spenders together spend less than China on defense activities. The share of Russia today is more or less the same as it was in 1992, about 3.3% of world spending. The evolution of Russia's share follows the expected pattern, i.e. a yearly decrease from 1992 onward to a nadir of less than 1.5% in 1998. Since 1999 Russia's share remounted reaching a peak in 2016 where Russia's expenditure represented more than 4% of worldwide spending.

While Russia's war against Ukraine moved Russia from the fifth to the third largest spender, the impact of this war surpasses the numbers shown in Table 1. In fact, Ukraine itself would enter Table 1 at place 11, whereas in 2021 the country was only on the 36th place. After the Russian invasion, Ukraine increased its military spending by 640% thereby surmounting large NATO member countries such as Italy and Canada in the list of biggest spenders. The war at the Eastern borders of Europe also affected spending of other countries. Fearing Russia's aggression, other former USSR countries also announced increased military spending in order to ensure territorial integrity. Lithuania for example passed a State Budget just to allow for an increase of defense expenditure to 3% of GDP in 2023, while Poland even targets a 4% defense burden (defense spending/GDP). Countries such as Sweden and Finland requested NATO membership. But also other countries reacted by increasing military spending. In fact, 23 Central and Western European countries increased their spending in 2022 leading to a sharp increase of about 13% (Sipri, 2023).

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## The Public Good Character of Military Spending and the Burden Sharing Debate

Throughout history countries have formed military alliances in order to collaborate on defense issues against a common enemy. One of the most famous (and long-lived) military alliance is the North Atlantic Treaty Organization or NATO. NATO was established by a group of 12 countries in the aftermath of World War II. The countries agreed to defend each other against attacks by non-members (the Warsaw Pact countries). Based on a doctrine of Mutual Assured Destruction (MAD) deterrence implied the launch of nuclear missiles as an answer to enemy attacks. Deterrence provided by nuclear weapons is a textbook example of a pure public good, i.e. a good with nonexcludable and nonrival benefits for the different member states. After the Soviet Union acquired missiles for a second strike, one could question this non-excludability (Kim & Sandler, 2020). If defense of one additional nation does not diminish the security effects for the other nations, defense is nonrival. Once collective defense is provided, it is also difficult or even impossible to exclude a member state (Khanna et al., 1998). Given these characteristics of collective security, member countries can benefit from the agreement regardless of their own contribution. Hence, a whole literature emerged on the aspects of burden sharing in military spending starting with the seminal article of Olson and Zeckhauser published in 1966. Their Public Good model argues that countries have an incentive to free ride



on the defense efforts of others. Providing an economic theory to explain burden sharing dynamics, they also empirically showed that larger allies choose higher defense burdens (i.e. defense spending/Gross Domestic Product) than smaller ones and hence that the latter take advantage from the efforts of the former. The underlying reasoning for this so-called exploitation hypothesis is that smaller countries value the defense provided by the alliance more highly than the larger countries while the latter typically contribute more (due to a relative smaller disutility caused by increased defense spending). A second implication of the public good character of defense spending is that total spending in the alliance will be suboptimal. As member countries do not take into account the spill-in effects (i.e. the positive security effects for the other members) of their spending on other members, total spending will be suboptimal.

As the military doctrine shifted from nuclear deterrence to flexible response in 1967, so did the conceptual framework for military spending. The idea underlying this new doctrine was that one would react more proportionally to aggression from the enemy using only nuclear weapons in case of a severe attack. As this doctrine hence combined nuclear deterrence with the use of conventional warfare capabilities, defense was no longer a pure public good. Due to the exclusive character of conventional capabilities allies do become partial rivals since one can be excluded from the protection offered by this conventional weapon (Oneal, 1990). To account for this 'new' nature of military spending, a whole range of authors have complemented the original model of Olson and Zeckhauser. Most contributions refine and redefine the nature of defense spending. Sandler's Joint Product model (1977) exactly describes defense spending as composed of both deterrence spending and protective spending. Since protection of a larger area (e.g. an additional member country) necessarily reduces the level of protection (for the existing member countries), this form of defense spending is rival. Pure protective weapons are exposed to a so-called thinning effect, i.e. their effect decreases in quantity and quality when a larger area is protected. Hence, the number of members in the ally now becomes an important variable and should be limited. Given that member countries also have to choose whether to invest in deterrence (public) or protective (private) measures, the joint product model moreover predicts that countries will undersupply collective deterrence compared to the protective efforts. While smaller member countries will still have an incentive to free ride on the effort of larger members, the differences also diminish with the relative weight of the private benefits. The relative share of private benefits in total output not only determines the degree of free riding but also the efficiency of total spending. If a country receives sufficient private benefits from defense spending, it will be more conducive to contribute thereby reducing the risk of suboptimal defense spending (Sandler & Hartley, 2001).

After the fall of the Berlin Wall and the collapse of the Soviet Union, NATO expanded with new member countries. As the new members were different in terms of defense preferences and risks, this also had an effect on burden sharing in the alliance. Moreover, as the threat of the Soviet Union as a direct enemy had disappeared, NATO started to focus more on peacekeeping missions (e.g. Bosnia

and Kosovo) and on out-of-area operations (e.g. Afghanistan War). This change toward a crisis-management doctrine required for example more highly mobile forces which had an effect on defense spending and hence on burden sharing. Whereas military spending related to the war on terror clearly has higher private benefits for countries being attacked more, out-of-area missions are expected to also bring purely public benefits as all members benefit from a secure environment (Sandler & Shimizu, 2014).

With Russia's military actions in Ukraine and the annexation of Crimea in 2014, collective security was back on the agenda and some European nations started to increase their defense spending. At the 2014 Wales Summit, the NATO member states committed themselves to spend at least 2% of GDP on defense while devoting at least 20% of this spending to the procurement of major new equipment and to related R&D. Hence, the change in the security landscape gave again rise to public benefit aspects of defense spending (Christie, 2019). While the aggressive actions of Russia in Ukraine only intensified leading to the invasion in 2022, recent years also witnessed a surge in the number of non-traditional security challenges. These challenges are often referred to as hybrid threats highlighting the combination of different, also non-violent, means. Hybrid warfare in the form of cyberattacks, disinformation campaigns, unconventional warfare, etc. again necessitate a different, i.e. non-conventional, answer. Hence, these new challenges also influence the composition and public nature of defense spending. While the diversity of the threats impede a generalization, one can rationally assume that defense spending as an answer to hybrid threats largely creates private benefits (e.g. the benefits of a well-established cyber-defense are clearly rival and excludable) (Balcaen et al., 2021). Hence, today military spending not only brings more public benefits (collective defense against Russia, antiterrorism campaigns), the advent of hybrid threats also increases the private benefits.

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## Burden Sharing: The Data

It should be no surprise that the majority of the countries listed in Table 1 are also the largest countries as expressed in terms of Gross Domestic Product (GDP). Indeed, as the GDP is an indicator for the economic wealth of a country, a larger GDP translates into more spending power of a country. Hence, in order to compare the economic burden of military spending, one mostly uses the defense burden as an indicator, i.e. defense spending/GDP. While it was former President Trump who explicitly threatened to withdraw from NATO due to unequal burden sharing, the debate dates way back almost to the birth of the military alliance. During the Wales Summit in 2014 all NATO member countries pledge to contribute 2% of their GDP to defense spending within the next decade (NATO, 2014). Even despite recent increases following the Russian invasion, not all member countries attain this minimum level to date.

As discussed in the previous paragraph, the unequal level of burden sharing can be expected to relate to the level of publicness (i.e. non-excludability and

non-rivalry) of the benefits caused by defense spending. The higher the public character of these benefits compared to the private ones, the more room for free riding on the efforts of other (typically larger) member countries. Numerous studies have empirically tested burden sharing between NATO member countries over time by examining the correlation between capacity (as measured by GDP) and defense burden (as measured by defense expenditure/GDP). While Olson and Zeckhauser in their original paper found empirical evidence for the exploitation hypothesis, after 1967 there was no significant relationship. Also during the flexible response regime, the share of private defense benefits increased and studies find little (except for 1985) support for free riding behavior by smaller member countries until 2010. The period from 2011 to 2017 again presents signs of disproportionate burden sharing. Following the theoretical literature a possible explanation for this pattern is that from 2011 onward defense spending was again characterized by more pure public benefits. As mentioned earlier, this could indeed be the case as the period represented a re-born Russian threat as well as increased transnational terrorism. Actions against Russia but also against terrorist groups such as Al Qaeda decline worldwide danger and hence have a highly public character (Kim & Sandler, 2020). As these threats did not disappear until today (on the contrary), one can expect that the public benefits of defense spending are still significant. On the other hand, as also highlighted in the previous paragraph and extensively discussed by Balcaen et al. (2021), the emergence of hybrid threats is likely to also positively impact the private benefits of defense spending. Hence, while the former is expected to lead to more free riding (i.e. Russian threat and transnational terrorism), the latter (i.e. increased hybrid warfare) is expected to curb free riding behavior.

Based on the data on real GDP and Defense burden for all NATO members in 2022 (see Table 2), we calculate the Pearson's correlation coefficient to test for the exploitation hypothesis. With a coefficient of 0.50582 these data suggest that there exists free riding from the smaller countries in 2022. The coefficient is also statistically significant ( $p = 0.00512$ ). As can be seen from Table 2 however, the United States is a large outlier in our table, both in terms of GDP and in terms of Defense burden. If we re-calculate the correlation coefficient leaving out the US, we find no significant relationship between the size of a country and its defense burden leading us to reject the exploitation hypothesis.

Of course, only comparing these burden sharing efforts does not take into account the differences in benefits each ally receives from the collective effort. Hence, some authors have already tried to link the burden sharing issue to these benefits. Often used metrics here are typically population or area (the underlying reasoning being that a larger population/area benefits more from collective security) (e.g. Kollias, 2008) or exposed border but also number of terrorist attacks (referring to the potential risk for a country) (e.g. Sandler & Hartley, 2001; Kim & Sandler, 2020). Taking into account the increasing use of hybrid threats it would also be reasonable to account for the vulnerability of a country vis-à-vis these new threats such as the number of cyberattacks (Du Balcaen et al., 2021).

**Table 2** GDP and defense burden for NATO countries in 2022

	Defense Burden	GDP (in US\$ billion 2015 prices)
Luxembourg	0,62	70
Spain	1,09	1.297
Belgium	1,18	512
Slovenia	1,26	55
Canada	1,29	1.735
Czechia	1,34	216
Montenegro	1,35	5
Turkey	1,37	1.191
Portugal	1,38	230
Denmark	1,38	353
Hungary	1,44	160
Germany	1,49	3.609
Italy	1,51	1.930
Bulgaria	1,54	61
Albania	1,57	14
Norway	1,57	430
North Macedonia	1,61	11
Netherlands	1,64	883
Romania	1,75	233
Slovak Republic	1,76	101
France	1,89	2.641
Croatia	1,91	63
Latvia	2,07	32
Estonia	2,12	29
United Kingdom	2,16	3.172
Poland	2,42	625
Lithuania	2,47	52
United States	3,46	20.909
Greece	3,54	214

Source: NATO – Defense expenditure of NATO countries (2014–2022) (consulted at June 22, 2023)

## Discussion

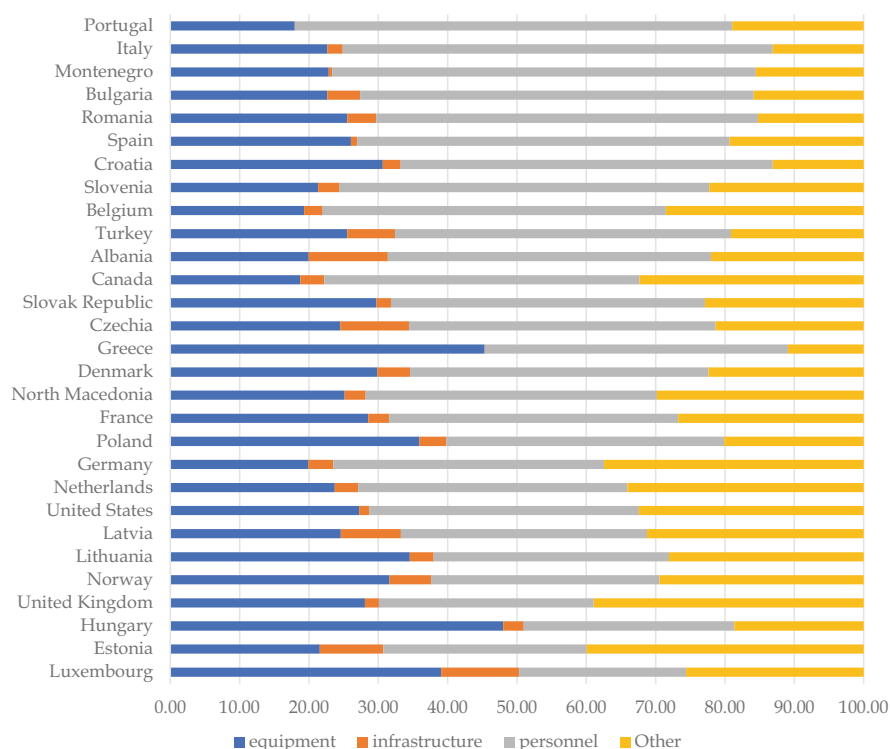
While our previous calculation did not really confirm nor reject the exploitation hypothesis, the burden sharing debate still carries on today, not in the least often sparked by quotes coming from political leaders of the United States. Better and more equally divided burden sharing was also again one of the topics during the recent NATO summits of Madrid in June 2022 and Vilnius in July 2023. As discussed previously in this chapter, burden sharing in NATO is intrinsically linked to the 2% rule. Although having the advantage of being very simple, it is dangerous

to compare defense spending between countries without taking into account some important caveats.

Firstly, when comparing the defense budget of 2 countries one needs to compare like with like. In light of the current war in Ukraine one often compares the budget of Russia with that of the NATO allies which support Ukraine. A simple comparison between Russia's budget and for example that of the United States seems to indicate a very unbalanced conflict where Russia is clearly in a disadvantaged position. Of course, military expenditure is a typical flow variable which, by definition, does not take into account the stock of military equipment a country already has available. Taking into account this large difference (Russia still has a lot of Cold War material), the exercise is still far from simple as the data on expenditure can also mean different things. While pensions for military veterans are accounted for in the NATO definition of defense budget, in the Russian data they do not explicitly fall under defense expenditure but are rather labeled as social policy expenditures. Moreover, Russia often uses state loans or guarantees coming from e.g. the Ministry of Industry to finance new military equipment. Of course, all expenses related to private military militias are also not included in the official budget. Hence, the Russian data clearly underestimate real military spending of the country which impedes direct comparison with for example spending in the United States. SIPRI does not only base its data on the data of the Ministry of Defence but also includes spending on military pensions, on paramilitary forces, the National Guard and the Border Service of the Federal Security Service as well as other spending by the Ministry of Defence (including for example education and healthcare) as well as the subsidies for the State Agency on Atomic Energy and the Baikonur Space Centre (Wezeman, 2020).

Differences in allocation of 'security' spending also exist within NATO allies and hence also comparisons of their military spending need to take account of these differences. Countering cyberattacks perfectly illustrates this point. While some countries developed cybersecurity capacities in the lap of their armed forces (e.g. Sweden's military budget increase for 2023 will largely be spent on its Cyber-Defence Unit) some countries have installed a separate Cybersecurity Centre with the support of other Ministries (e.g. Home Affairs). If the latter is financed by non-defense budget, these efforts do not appear in the defense burden metric although they do have the same effect as if they were financed by defense budget.

A third impeding factor relates to the composition of the defense burden metric. As burden sharing relates defense spending to GDP, these metrics not only fluctuate as a consequence of changes in defense spending but also due to economic growth. A negative evolution of the GDP (e.g. due to the COVID pandemic in 2020) can already increase a country's defense burden even without increases in its defense budget. Moreover, looking at the complete defense budget doesn't always provide a clear image. As NATO members promised in Wales in 2014, they wouldn't only strive to a 2% defense burden but also to 20% of the defense budget spent on military equipment. The reasoning behind this decision was to install some kind of efficiency standard for military spending. As can be seen from Fig. 3, there is a large dispersion



**Fig. 3** Defense expenditure per category for NATO members in 2022

in the spending per category between the NATO member countries. While Hungary spends more than 48% of its defense budget on equipment, Portugal barely spends 18% on new equipment. This high number for Hungary clearly illustrates the country's defense modernization and capability-building program launched in 2017 but nevertheless stands out in the group of the other allies. But also for other smaller or medium countries it is difficult to obtain a continuous investment level of 20% in new equipment and numbers typically tend to fluctuate with investment plans. For bigger countries it is easier to reach the 20% investment goal (Struys, 2022). For the majority of the countries the personnel category takes the lion's share of the budget. The average percentage spent on personnel is 44% with Portugal (63%) and Italy (62%) as the 2 extremes on the upper limit and Luxembourg (24%) on the lower limit. For some countries (e.g. Belgium with 49.5% personnel costs) these high numbers of personnel costs reflect a pension burden. And although these expenditures hence contribute to the 2% goal, one can hardly argue that they contribute to the military capabilities of the country. Hence, when measuring defense efforts, it is however important to not only measure inputs but also outputs. While a discussion on how to measure Defense output goes beyond the scope of this chapter,

a seminal work here is Hartley (2011) and also the publication of Bogers and Beeres (2013) measures the output by studying the contribution of different countries to the Afghanistan Mission. How do the monetary inputs translate in concrete results? Beeres and Bogers (2012) provide a clear framework to see how inputs in the ‘military production process’ in terms of defense budgets transform to outputs such as number of deployable units or number of detected explosives. While a thorough discussion of this framework goes beyond the goal of this chapter, these authors show that the ranking of performances of different armed forces also largely depends on the selection of the output measure (e.g. deployability versus investment in material).

And last but not least, a correct comparison between defense budgets can only be done based on purchasing power parity exchange rates. Again, taking the example of Russia versus the United States, it wouldn’t be correct to just compare the rough nominal numbers for 1 \$ cannot buy as much in the United States as it can in Russia. Personnel for example is much cheaper in Russia as the country still relies on conscription. A highly ranked officer in the Russian army earns approximately 25–30% of his British homologue (Wezeman, 2020). Not only personnel is cheaper in Russia but also Military Equipment. As Russia also has a well-developed industrial base, the country doesn’t have to import much material from other countries. Connolly (2019) estimated the difference in military expenditure expressed in market exchange rates or expressed in Purchasing Power Parity (PPP) exchange rates for Russia. His estimates show that expressed in PPP Russian military expenditure was about 2.5 times higher than expressed in common market exchange rates. This means that the difference with the US military expenditure is also significantly lower as commonly assumed. For 2018 for example Russian military expenditure would be about 25% of US military expenditure instead of only 10%. Adjusting military budgets for purchasing power is hence important. As inflation for military equipment usually surpasses general inflation, one should probably even correct nominal numbers even more (Robertson, 2019).

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## Summary

The invasion of Russia in Ukraine not only massively increased worldwide military spending but also sparked the debate on burden sharing between NATO allies. This chapter gave an overview of the different theoretical models used in this debate. It is clear that the dominant military doctrine determines the public good character of defense spending and hence also the incentives for member countries to free ride. Given the current geopolitical climate and the advent of new (hybrid) forms of warfare, one can expect that this burden sharing debate is not to be settled any time soon. As this chapter however also largely emphasizes, the debate can only be constitutional if one takes into account the caveats which are related to the metrics used in the debate.

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### ► Operations in Irregular Warfare

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# Foundational Concepts of Military Logistics

Paul C. van Fenema and Ton van Kampen

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## Abstract

Military logistics can be seen as a set of processes that supports military organizations in their development into a capable and functional sustaining military force. Thus, the objective of this chapter is to bring to the forefront and elaborate on some of the foundational premises of military logistics as it is portrayed in its body of literature. To guide this presentation, a generic model is presented which relates logistics' process and structure sides to its generic and mission specific sides. After these generic foundations, two deep dive themes are explored: *strategic alignment of resources and logistics management* and *strategic defense supply chain security management*. Recent historic cases illustrate the two themes. The chapter concludes with new ideas on military logistics innovation

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Both authors contributed to the manuscript equally.

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P. C. van Fenema (✉) · T. van Kampen  
Netherlands Defence Academy, Breda, The Netherlands

and draws attention to innovation and performance challenges in the context of military organizations cooperation.

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**Keywords**

Military logistics · Strategic alignment · Supply chain security

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**Introduction**

As civilians, we have grown used to a sophisticated portfolio of products that can be delivered at our doorsteps within hours or days at the most (Mangiaracina et al. 2019). Seamless global and local transportation flows connect demand and supply, supported by advanced information technologies. Business-to-business relationships include massive shipments of raw material and (semi-finished) parts to empower production (Schönsleben 2016). While global logistics functions for most of us on the background, natural disasters and pandemics like Corona in 2020 immediately highlight its importance and complex dependencies: “Since China reported the first case of coronavirus to the World Health Organization (WHO) about 12 weeks ago, the arteries of the global logistics sector have begun to clog up” (Khasis 2020).

If we shift our attention to the military, logistics has played at least an equally important role throughout history in this realm of societal activity. Soldiers and their machines cannot fight without constant supplies, at places most of us will never visit. Throughout history, many military leaders had not realized the essence and importance of logistics and failed to appreciate its impact on the battlefield. They paid dearly for their negligence. George Washington in the American War of Independence, Napoleon in Spain and Russia, General Ludendorff in WWI, Field marshal Montgomery in WWII, and General MacArthur in the Korean War are just a few examples of commanders who excelled in combat planning and execution, whose disregard of logistics resulted in grave operational consequences and the loss of the life’s of too many soldiers (Kress 2016).

van Creveld argued that technological improvements brought significant changes in military operations. These changes affected the way war was conducted and the inputs that were required for the war-making process. The development of new and effective fire-producing weapons prompted a vast increase in ammunition expenditure, which in turn resulted in a need for many more means of transportation. Moreover, an all-mechanized and motorized army replaced horses, mules, and oxen. Fodder was replaced by vast amounts of fuel, and maintenance meant heaving on hand stocks and special-purpose tools (Kress 2016; van Creveld 2004).

Over the last centuries, distance between the military’s operational theater and its home base has expanded as a prelude to massive globalization of trade. A vivid example of the new challenges posed by distance is operation Barbarossa in WWII. On June 22, 1941, Adolf Hitler launched his armies eastward in a massive invasion of the Soviet Union: three great army groups with over three million German soldiers, 150 divisions, and three thousand tanks smashed across the frontier into

Soviet territory. The invasion covered a distance of two thousand miles and the Germans suffered serious deficiencies in sustaining their troops: Their logistical preparations were grossly inadequate for such a massive and back-breaking campaign; and German industrial preparations for a sustained war had yet to begin. Early December the Germans were stopped at the gates of Moscow. In desperate conditions, they conducted a slow retreat as Soviet attacks threatened to envelop much of their forces in a defeat as disastrous as that which befell Napoleon's Grand Army in 1812. Barbarossa was the crucial turning point in World War II.

One of the best examples of a long-distance network is described in "Moving Mountains: Lessons in Leadership and Logistics from the Gulf War" (1993) written by William G. Pagonis and Jeffrey L. Cruikshank. In record-breaking time, the USA deployed 550,000 troops and 7,000,000 supplies halfway around the world against enormous constraints. As chief logistician, Pagonis was able to form the most effective logistics team ever assembled in the planning, execution, and redeployment of this monumental effort. Lt. General Pagonis succeeded to guarantee delivery of flawless logistical support that could make or break the entire war effort. A responsibility given to him by General Schwarzkopf in person (Pagonis 1993).

The objective of this chapter is to introduce Military Logistics as an academic field and elaborate on some of the foundational premises for military logistics in practice as it is portrayed in its body of literature. Thus, the following section will focus on the foundational concepts of military logistics establishing its purpose in the military organization. Thereafter, military logistics will be elaborated through a closer look at two "deep dive" themes: strategic alignment and supply chain security management. The elaboration on these two themes will seek to display the relationship of theory, doctrine, and insights from military logistical practice.

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## Foundational Concepts of Military Logistics

### Definition and Relevance

Speaking across military and commercial domains, logistics is defined as processes of planning, implementing, and controlling for the efficient and effective transportation and storage of goods from the point of origin to the point of consumption (CLM 1998). In the military context, before the modern era, logistics was considered the "practical art of moving armies" (Jomini et al. 2007). Back then, war was about huge numbers of soldiers and basic, disconnected technologies. Military scientists started to realize the importance of logistics to enact strategies and tactics. With technological advances, war and military logistics have co-evolved. In our era, logistics is still defined as the science of planning and carrying out the movement and maintenance of forces (NATO 2014, p. 2-L-5). Yet it has come to encompass several interdependent activities geared towards people and weapon systems. This leads to an extended definition of military logistics as activities required for:

- *Acquiring* military organizations' physical goods (supply chains, military mobility) and weapon systems, and hiring people, *administrating*, and *moving* these towards, within and out of a theater. Goods, people, and systems could refer to contractors' services delivering desired functions.
- *Accommodating* the military all over the world (facilities and services for people and weapon systems).
- Making sure soldiers and future weapon systems receive and can use relevant commercial and *military technology* for their job (technology management and maintenance). These technologies are increasingly intelligent and networked, think of hybrid warfare (Hoffman 2009).

Even in the era of cyber and information warfare, logistics remains relevant with respect to human warfighters and physical resources. While logistics enables commercial businesses to outperform competitors on service and costs, that is, a focus on profitability, the objective of military logistics is “to comply to the best compromise regarding users' demands with acceptable costs and capital use” (Wijbenga 2019). Resonating the introduction chapter's distinction of hot and cold domains, the perspective of military logistics comprises both peace-time logistics and support to on- and off-shore operations, planned or unplanned (Gallasch et al. 2008). It must establish, organize, and run lines of supplies (“lines of communication” in military jargon) such that armies can move and fight, including real life support and maintenance. The primary objective of military logistics – depending on strategic and operational requirements – is to enable and sustain a specific state of readiness for war, i.e. fighting power, at the lowest possible overall cost.

Fighting power is the ability to conduct military operations in an optimum cohesive totality of functionalities and components. It is more than just the availability of means (capacities); there must also be the willingness and ability to deploy these means (capability). (Use of the term capability the concept of routines in business literature (Makadok 2001).) If this is properly developed, it then becomes fighting power, and capacities are elevated to capabilities. Logistic support is essential in realizing and sustaining the operational use of materiel: the assured supply of fuel, spare parts, ammunition, food and medical supplies to the training or deployment area is often critical to the success of a military operation (MoD 2019).

Once an operation has begun, the deployed force must be able to sustain the operation as long as is necessary to achieve the desired effect. To guarantee the sustainability of an operation, all the required conditions must have been met. Logistics deliver a vital contribution to sustainability; the latter term is not directly related to sustainability as in reducing harm to the natural environment. The sustainability function entails support with the materiel, personnel, and financial means required to build up and maintain fighting power. A logistics plan based on the operation is also essential for the realization of the objectives. Any deployment without a logistics plan based on maneuver, fires and force protection is doomed to failure (MoD 2019). Logistics preparation must, therefore, be included from the start of the planning process.

So, the metric for military logistics success is readiness, not profit (Burns et al. 2010). More specifically, military logistics is required to operate in a cost-efficient mode during peacetime, but then – often at very short notice – it must transition to a posture in which effectiveness is paramount and cost a secondary consideration. Recent experiences with the Corona virus offer vivid examples of such scaling up. After all, while business competition tends to grant competitors second chances, a military conflict does not come with this luxury.

The (Generic) Military Supply Chain

Military logistics support defense organizations’ main value creation processes of ensuring combat power elements, preparing combat power, and enacting it (i.e., missions). Figure 1 shows a framework of Defense value creation and Defense logistics, offering a strategic concept for structuring activities. The framework combines common Defense value chain and logistics concepts (de Bakker 2012, p. 552; MoD 2015b). The upper half depicts three main value creation processes constituting Defense value creation. The main value creation processes materialize

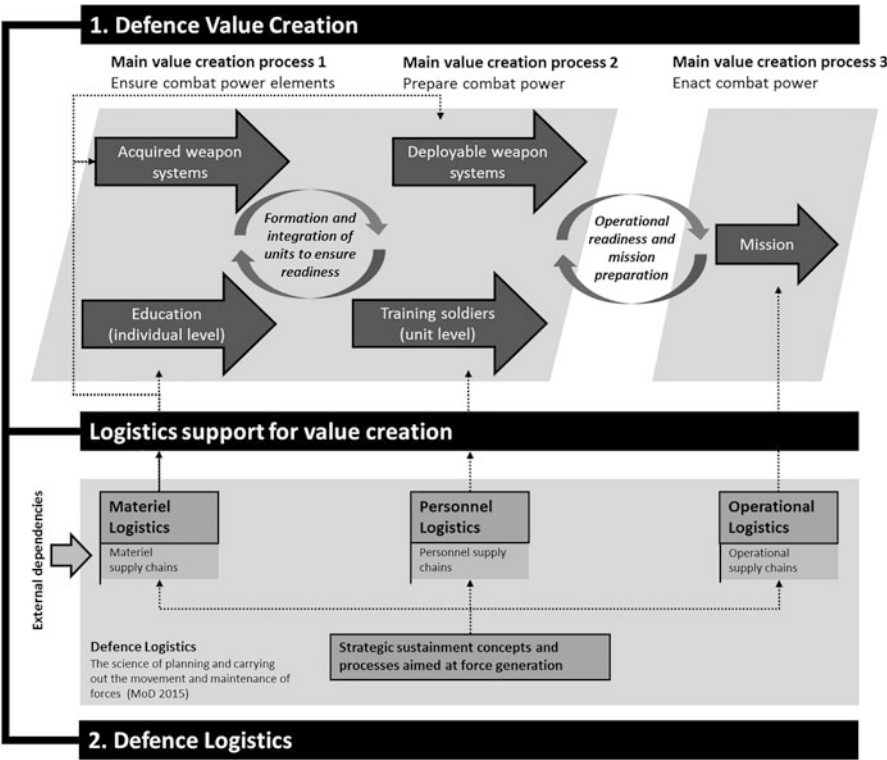
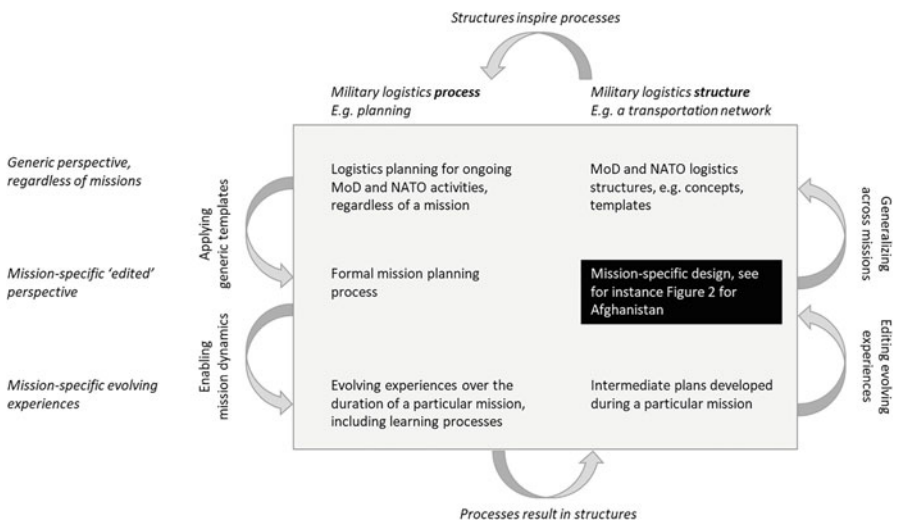


Fig. 1 Defense value creation and defense logistics framework

the constitutional stipulations for the defense organization. Combat power depends on eight elements: leadership, information, mission command, movement and maneuver, intelligence, fires, sustainment, and protection (USArmy 2011). To this end, (trained) people and (deployable) weapon systems are required (de Bakker 2012). The required logistical support focuses on personnel, materiel (including stockpiling), and operations. Materiel logistics, then, can be understood in a limited sense (focused on equipment) and in a broader sense (products and services required for force generation excluding personnel logistics).

Operational logistics (Fig. 1, bottom right) stretches across a network of nodes with multiple processes, through which personnel and materiel – equipment and supplies – flow and services are provided to a deployed force. A military supply chain is designed as a flexible set of supply chains connecting points of production and use, ensuring the most appropriate and efficient use of resources across all its nodes, maximizing information and technology to assure logistic support to operational commanders (MoD 2015b, p. 9). A military supply chain is specifically tailored (i.e. aligned) to the characteristics of the operation. By using different modes of transport – that is, air, sea, rail, and road – the operational supply chain comes into action.

Figure 2 shows a mission-specific logistics structure (black box, right hand “structure” column of Fig. 2). The left-hand column shows processes pertaining to logistics. The two columns reflect the structure-agency debate in organization sciences (van Fenema and Keers 2020). Vertically in Fig. 2 we distinguish and relate a generic level (top) and mission levels; the latter in the sense of an “edited” format and “evolving experience.” Across the columns and levels linkages are depicted with rounded arrows.



**Fig. 2** Military logistics processes and structures

To better understand the intricacies of logistics supply chain networks, we elaborate on two deep dive themes. Our first foundational and elaborate theme explores strategic alignment to link military logistics to military value creation. Our second shorted and specialized theme concerns security management. The Afghanistan example illustrates creation of a complex supply network due to security risks and operational uncertainties.

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## Deep Dive Theme 1: Strategic Alignment and Theater Exit

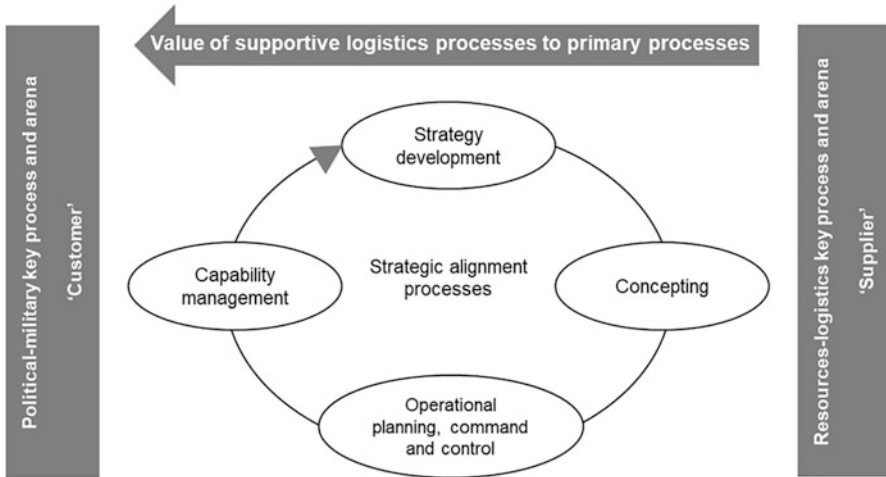
The relationship between operations by which an organization creates value and logistics has been a pivotal subject in business and military logistics literatures (Kress 2016; Stank et al. 1999). Phases of a mission need to be timely planned, carefully prepared, and perfectly executed. Responsibilities must be clearly defined, and the physical execution must be done by logistical experts because of the required skills and specific knowledge. Since many stakeholders are involved, strategic alignment is essential during executing. Only under these conditions unnecessary costs can be avoided, necessary contracted labor can be limited, and no expensive resources are being wasted. We explore theory and practice of strategic alignment, both tied to the process of exiting a theater as a complex situation the military struggles to deal with.

### Theory

Strategic alignment emerged as a conceptual phenomenon in the early 1990s. Researchers started to examine the relationship between theorizing on organizations' competitive (business) strategy (combinations of mass versus niche market and differentiation versus costs focus) (Porter 1998; Speed 1989) and the strategic role of Information Technology (IT) (Henderson and Venkatraman 1992). Building on this stream of research, we read logistics for IT as another supportive organizational function. Hence, strategic alignment refers to the degree to which a primary process (here: political-military processes) is supported by and supports an enabling-sustaining process (such as IT, logistics, facility management) (Sabherwal and Chan 2001). This cyclical view, echoed in operational military logistics scholarship (Kress 2016), allows for theorizing on how decision-making dovetails with logistics and resources processes ("supplier"), and how the latter processes can be of value to political-military stakeholders ("customer"). Figure 3 provides an overview which we elaborate on.

Literature demonstrates a wide variety of missions and shows the dynamic nature of these missions as they proceed and come to an end. In this versatile environment of conflicts, resources play a pivotal role. Resources in the theater – belonging to the internal and external actors present in the theater (Sinno 2008) – vary as well in terms of quantity and quality; this also applies to logistics as an enabler of resource management. Resources encompass military and civilian assets; in this chapter,





**Fig. 3** Strategic logistics alignment framework

natural resources originating from or required by the theater are not considered. Moreover, more civil resources and new logistics concepts may be required to cater to the new demands of the operational phase. In general, logistics should be aligned with the specific properties of the type and phase of a mission (Kress 2016).

While resources and logistics could be approached at an operational level, we include the strategic level as is common in nonmilitary supply chain management (Hulsmann et al. 2008). Missions, after all, are embedded in long term strategies of actors involved in or affected by a mission. Two major arenas of actors should be acknowledged (Scholtens 2008): political-military and resources-logistics. The alignment relationship between these actors' arenas is dynamic. Current literatures on alignment (Chan and Reich 2011) adopt a process perspective to understand the dynamic interplay and evolution of intersecting processes. This paragraph explores how political-military and resources-logistics arenas intersect in a dynamic manner. Generic notions from literature are presented to build the alignment framework.

At the center of Fig. 3, we show four processes constituting strategic alignment, each pertaining to the customer and supplier.

### Process 1: Strategy Development

In relation to military logistics, *Customer Strategy Development* refers to the political-military strategy development which is understood here as formulating long-term objectives for a particular theater. These may partially conflict with those held by intra- and extra-theater actors. For instance, theater politicians seeking rapid exit versus politicians from abroad being concerned about longer term influence; or rapidly organizing exit versus continuing some vital mission activities. Such objectives articulate long term abstract ideals, for example, "bringing a democratic

government to Haiti” (Strednansky 1996). These abstract statements need approval of multiple actors to ensure their mandating (Zaum 2012), and they need operationalization.

On the other hand, *Supplier Strategy Development* depicts the supplier’s strategic perspective. Operations are about influencing a theater; they demand resources and logistics to be sustained, in particular when the military operates in a geographical theater abroad. At the strategic level, organization of resources and logistics ideally reflects the articulation of political-military objectives in a coherent manner. That is, features of political-military objectives are translated into value driving features of resources-logistics processes. This translation process is similar to supply chain strategies matching business strategies in a commercial environment (Perez 2013).

In a commercial setting, predictable demand leads to efficiency-oriented supply chains; unpredictable demand – for example, innovative products – requires supply chains aimed at effectiveness (Selldin and Olhager 2007). For military missions, translation of military-originating requirements into strategic resources-logistics value drivers resembles this commercial example. Specifically, two sides of resources-logistics strategy development can be distinguished in commercial-logistics literature: external logistics performance and internal logistics efforts (Van Goor et al. 2019). Externally, they are aimed at achieving “customer” (i.e., political-military) objectives, which refers to service levels in business terms, for example, how quickly are products made available. “Internal” concerns the resources-logistics processes themselves, focused on delivering such performance at lowest possible costs. The better customers are served and the lower the costs, the more value resources-logistics processes add. In the military, customers are political-military stakeholders. The external dimension of resources-logistics processes refers to them. Internally, costs may not be the primary criterion for military resources-logistics processes. Availability is a key concern for commanders, for instance, rather than costs.

## Process 2: Concepting

**Customer Concepting** It refers to generic, in a military sense doctrinal, conceptualization of military operations and logistics, regardless of planning for a specific mission (phase). Past missions have yielded a myriad of concepts that can be used to understand, configure, and enact (phases of) operations in a specific theater. They increasingly capture the continuum between war and peace. Concepts, including approaches or methods, range from warfare to operations other than warfare, for example, peace support operations, integrated or comprehensive approach on the topics Defense, Diplomacy and Development (3D), “peacemaker method,” Provincial Reconstruction Teams (PRT), Counter Insurgency (COIN), and policing (Strednansky 1996).

Concepts consist of evolving sets of features or principles (Alvesson 1998; van Fenema and Keers 2020), such as combined arms (Moten 2010), or “go small, local, and long” for missions like Afghanistan (Gartner and Blanken 2012). Historic

examples suggest that concepts provide a rough outline of what is going on. Misestimates and misrepresentation have frequently occurred, such as “going light” during initial UN operations (Brahimi 2000), and framing Afghanistan as a peace support operation when security remained problematic (Gans 2019). This represents an important phenomenon. Sometimes, the political arena seems to call for a particular conceptualization to obtain political support, sometimes lessons from earlier missions are not applied, and sometimes the complexity of theater events prevents (agreement on) clear conceptualization.

***Supplier Concepting*** Resources-logistics concepts refer to, for instance, support concepts with associated organizational structures, (location and size of) stocks, physical flows, information processing, contracts, and the role of contractors (Leblanc 2008). Their features may vary from centralized to decentralized, autonomy or self-supporting versus outsourcing, military versus civilian, and light versus heavy. The value impact of resources-logistics concepts, that is, their relevance, depends on the extent to which they match strategic objectives pertaining to resources-logistics. Ideally, a concept matches key elements of strategic objectives. As mentioned, value concerns the external catering to customers’ value drivers while lowering internally the costs of resources-logistics processes. Concepts cover responsibility distribution across different levels of organization (Leblanc 2008).

In military organizations, doctrinal concepts have been developed and adjusted, providing some clarity and commonality in the way military organizations’ own professionals and their counterparts work (Futrell 1989). Concepts are selected depending on their usefulness for resources-logistics strategies pertaining to a particular theater. For instance, airborne supplies, though costly, may be appropriate under time pressure and adverse geographical or security conditions. And private contractors may fit in a concept for supporting prolonged presence of troops without military organizations’ resources deployed. Increasingly, resources-logistics concepts involve international military cooperation and private contractors. This way, cooperation synergies can be utilized, and troops and their military organization can focus on the core mission.

### **Process 3: Operational Planning, Command, and Control**

***Customer Operational Planning, Command, and Control*** Planning and control operationalize the former two dimensions strategy development and concepts. Researchers propose rational and political approaches. From a rational-engineering angle, researchers emphasize the role of clear and consistent metrics that can show when desired conditions have been achieved (Innocent and Carpenter 2009), and enable meaningful measurement of outcomes rather than inputs (Caplan 2012). Actual data from the theater can be offset against these metrics (or “anticipatory indicators of success” (Gartner and Blanken 2012)). At times, strategic objectives remain vague, making measurement impossible (Zaum 2012).

Those favoring or emphasizing political approaches, on the other hand, raise concerns about the “value judgments, assumptions or prejudices built in to the very choice and articulation of indicators” (Farrall 2012). Showing progress may bear political relevance to the supporting nations’ and theater-based public and political system (Caplan 2012). The role of past experiences could receive only scant attention. Moreover, capturing the complexity of theater dynamics would take more than a limited set of indicators and associated data processing. Foresight would be required involving a myriad of actors (Richardson 2009).

In addition to these rational and political approaches towards performance, researchers stress the varied nature of performance, that is, military and civilian efforts befitting “whole of government” approaches (Caplan 2012).

Finally, planning and control require organizing: which organization has responsibility for what, how are roles divided? Who sets priorities to allocate (often insufficient) resources (O’Hanlon and Sherjan 2010)? Contributing actors from inside and outside the theater will have their own planning and control cycles. Inevitable “interagency squabbles” (Fukuyama 2004) and turf wars have to be sorted out. No single actor has a complete overview and all-inclusive capacities (Reiter 2009). Some actors may specialize in particular aspects of planning and control, such as military or civilian efforts. Network structures are required to connect actors; they call for political commitment, dealing with cultural diversity and figuring out mandates of and contributions by participating actors (WP 2009). These could be decentralized or (somewhat) centralized by means of a lead agency. Such an agency, typically not a national Department of Defense (Fukuyama 2004) but, for instance, an UN agency, “act(s) as a point of contact for other agencies, particularly in the areas of planning and information-sharing” (Flavin 2007). It can facilitate interaction among actors aimed at planning and control. With respect to exit planning and control, early efforts may be useless due to changing circumstances (Caplan 2012). Moreover, actors need to bear in mind the fragile nature of peace and the likelihood of postexit efforts (Caplan 2012; Strednansky 1996).

Based on strategic alignment and planning, command and control rely on metrics to coordinate activities. In order to control, these are offset against information from the theater. In a complex theater such as Afghanistan, this proved cumbersome: “The current situation on the ground has proven so fluid and poorly measured as to be almost impossible to characterize with any degree of certainty” (Gartner and Blanken 2012). Multiple military and nonmilitary actors are involved in the command and control processes during all phases of a mission.

***Supplier Operational Planning, Command, and Control*** In coordination with planning and control for political-military processes, military and civilian actors plan their resources and logistics flows. Planning is as an activity that connects political-military and resources-logistics processes. It has been generally defined as “working out in broad outline the things that need to be done and the methods for doing them to accomplish the purpose set for the enterprise” (Mintzberg 1981). While this definition applies to the enterprise level, we consider this concept for a mission. Planning, then, is a process of translating strategic objectives into a funded,

workable, resourced, and logistically feasible set of ideas for organizing action. For military operations and their expected objectives, sufficient resources have been noted as a major concern (Innocent and Carpenter 2009). Plans may represent an ideal situation that lacks adequate sources (Innocent and Carpenter 2009; O'Hanlon and Sherjan 2010). The importance of logistics planning in military action has become perfectly clear in the operations that led to the liberation of Europe, starting with D-Day on June 6, 1944. The landings in Normandy and the following supply chains had a large influence on the success of the allied operations. To stop the ceaseless supply of allied stuff, and to split the Allied lines, Nazi-Germany launched a desperate counteroffensive to regain the port of Antwerp in the winter of 1944/1945 – the so-called “Battle of the Bulge.” This counterattack failed not because of a lack of fighting spirit or fire power on the Nazi-side, but because of an inadequate supply of people and material resources, in particular fuel and ammunition. The attack simply stopped because after a few days there were no more supplies for the Nazi-troops on the right place at the right time. A counterattack to stop successful logistics failed because of unsuccessful logistics planning. Planning has not only a (traditional) professional-technical flavor; it also reflects assumptions in a political sense and in the sense of dealing with the ambiguous impacts of planned actions in the theater. Historic examples show the complex nature of planning as a form of coordination that precedes an operation (Moten 2010). And its indispensable role and challenge of making realistic estimates for different operations, for example, overestimating own capabilities and underestimating those of an opponent (Johnson and Tierney 2011). Militaries invest in synchronization of their common operational picture with their common logistical picture. This also concerns criteria and priorities for decision-making in these two realms. Theater logistics involve both strategic transportation and intratheater logistics. Planners have to deal with geographical and infrastructural properties of the theater, including entrance routes (O'Hanlon and Sherjan 2010). Increasingly, enabled by IT, resources, and supply chains in the commercial world become more visible in the sense of knowing what is where, what the condition of assets is, and how long physical flows will take (Wang and Wei 2007). These approaches start to be introduced in military organizations. Analysis of patterns adds to organizations' ability – across units active in the same theater (Leblanc 2008) – to report on, predict, respond, and adjust resources-logistics processes, for example, equipment wear and tear (Hampapur et al. 2011; Leblanc 2008; Maas et al. 2014). Coordination of resource decisions with resources-logistics planning beyond a mission can underpin higher overall performance levels. This results from balancing across theaters and coordination with international actors' home-base requirements for equipment. While visibility and analytics tend to be developed at the organizational level, network-level efforts would pay off to leverage economies of scale. Planning and control demand attention to balancing issues, such as how to deal with scarce logistics capacity.

## Process 4: Capability Management

**Customer Capabilities** Finally, political-military processes draw on deployable capabilities to achieve their objectives. Capabilities refer to coordinated practices and materiality and represent constituents of (military) power (Reiter 2009). The military has been used to frame their tasks and resources in terms of high-level capabilities, for example, airlift, manpower, and firepower. While attempts are made to generate (high level) capabilities at the network level, research suggests, capability management at mission level tends to present a challenge to UN and NGOs as they lack (authority over) resources (Strednansky 1996). Current missions call for a diverse set of capabilities to influence the theater. Increasingly, this set encompasses nation building capabilities (Sigal 2007), media capabilities for communicating with the public (Tuck 2004), capabilities to attract international support for the mission (Filson and Werner 2004), and cyber capabilities. The role of capabilities depends on for instance the theater's public, threat of opposing forces, and mission phases (Reiter 2009). Capabilities as a notion can be interpreted as a political-military topic (obtaining agreement on use of capabilities) and in physical terms (i.e., actually being able to perform the capability) (Whalan 2012).

**Supplier Capabilities** Alignment of resources-logistics processes with political-military capabilities is important. Research suggests room for improvement, in the sense of anticipating requirements for resources and logistics. "The emphasis on logistics in future operations must come earlier, and must include a simultaneous rebuild of strategic level sustainment capabilities (i.e., "supplier" capability – authors) with the theater security capabilities (i.e., "customer requirements for resources and logistics based on their political-military required capabilities" – authors)" (Leblanc 2008). Missions draw on multiple actors to provide such capabilities. Nations decide more and more on services they want from or deliver to other nations, NATO, and contractors. This improves economies of scale. Capabilities required for external value delivery (i.e., to customers of resources and logistics) are being sourced in part from outside the military organization (Davids et al. 2013) rather than – as has been a military tradition – striving for autonomous resource management and supply. As IT permeates the military realm, organizations strive to gain instant access to physical resources and flows; capabilities can be precisely tailored. In practice, the impact of these innovations remains to be seen given the commonly complex and volatile nature of exit phases. For international military actors, strategic transportation and in-theater wear and tear present palpable challenges for extended involvement in a theater (Strednansky 1996; van Kampen et al. 2012). Sophisticated asset management capabilities – in cooperation with commercial suppliers – are called for to keep assets available in taxing environments. Network cooperation can be used to provide a pool of strategic transportation assets.

## Practice: Doctrine and Learning during the Exit Process

While much research has explored starting and managing a mission (de Leeuw et al. 2012; Kapucu and Garayev 2012; van Fenema 2010), the final phase has received scant attention. That is why we seek to understand its dynamics as an example of strategic alignment challenges. The dynamic nature of exit phases calls for adaptation of organizational processes and learning from experiences in the theater and previous missions. As earlier elaborated, exit represents a specific phase of a mission compared with deployment (i.e., deciding on a mission) and sustainment (fine-tuning during a mission). In general, learning within the theater depends on “information gathering mechanisms, centralized field coordination, experienced staff distributed over the field, and capable leaders. Additional preconditions include the supply of well-trained and well-equipped troops in adequate numbers and requisite funding” (Howard 2008). Ideally, towards the end of a mission, organizations have learned a lot about the interplay of political-military and resources-logistics processes. Moreover, insight in theater and how actors respond to interventions has been expanded. Yet how the theater responds and participates in an exit process remains unknown.

At the end of an operation, it would be unusual, and possibly a sign of strategic failure, if a nation’s defense forces were withdrawn without a progressive reduction of force levels and a staged drawing down of equipment, inventory and other materiel, infrastructure and people. However, that is not to say that logistic planner are likely to have all the freedom they desire to achieve a carefully planned and managed drawdown and withdrawal from theatre; for example, the withdrawal of UK, US, and other coalition forces at the conclusion of the 1991 Gulf War was to a large extent shaped and influenced by cultural sensitivities and the need to have completed the bulk of tasks before the Ramadan (J. E. Smith 2018).

With hindsight, concepts emerge that seem to work in a current operation or previous ones, e.g. reusing the COIN principle “going small and local” from Vietnam in Afghanistan (Gartner and Blanken 2012). These concepts that apply to an entire mission could be refined for their exit phase. Organizations could learn how to back up these concepts with required resources and logistics. This parallel learning in resources-logistics in conjunction with learning in the political-military area seems of interest and warrants more research, in particular with respect to exit. We examine doctrine and actual experiences.

### Doctrine

During a strategic exit, a lot of stakeholders are involved from inside and outside the theater. For instance, decision makers on the political and military dimensions of exit and military and contractors involved in logistics and resource management. Hence, it is of outmost importance to have a common understanding of the conceptual framework of a strategic exit. Unfortunately, there is no actual doctrine on strategic exit or redeployment from operations. The written instructions and guidance on strategic exit are outdated and not concentrated within a single doctrinal publication. The strategic exit of forces from a theater must be accomplished in such a way as to



support follow-on operations or a renewal of combat. How to plan for the exit or deliberate disengagement of forces while in contact is therefore a crucial element of operational planning and must be viewed as the final act of any campaign (USArmy 2012). Because of the risks, strategic exit need to be prepared and executed as a unified military operation. During an exit, both personnel and equipment are vulnerable to enemy attacks (Boyd 2015). Exit needs to be part of the overall campaign plan. Strategic exit is the last phase in this plan with a clear focus on re-establishing unit integrity and accountability of personnel and equipment. According to the doctrine of the Netherlands Army, this strategic exit phase, involving redeployment, is executed in several phases, representing a linear-sequential approach (MoD 2015a). There are three basic disposition options for drawing down equipment: (1) returning it to inventories outside the area of operations, (2) transferring it to another agency or the government of another country, or (3) destroying it. Transfer to other entities, such as state governments by means of donations or sales, may also be possible.

## Cases

Three examined cases on strategic exit – Kosovo, Iraq, and Afghanistan – of Dutch and US Armed Forces proved challenging and presented similar issues. Logisticians faced the huge challenge of re-establishing property accountability, inventory control, and supply discipline after years of conducting military operations. Gaining accountability of the property is the first step to understanding the challenges associated with withdrawing forces. As Lt. Gen. Mason stated, “*Leaving Afghanistan has become one of the most difficult operations the US military has ever undertaken. It’s the biggest operation in terms of complexity, seize, and cost*” (Boyd 2015). Three lessons were learned on strategic exit:

1. *Command and control.* Because there are a lot of actors involved during an exit, it is of utmost importance to have a clear command and control structure (unity of command) in which tasks and responsibilities are completely unambiguous registered. During the Kosovo, Iraq, and Afghanistan withdrawal, there was no clear command and control structure although some significant progress was made. The lack of a clear command and control structure also leads to an inefficient use of assets.
2. *Accountability of Government Furnished and Theater Provided Equipment.* Nowadays it is almost unthinkable that a coalition of military forces can deliver all logistic services by itself. More and more contractors are used to support the military units. The Dutch armed forces also used contractors for (rotary wing) transport and other logistic services such as the supply of fuel and food to the different bases. Using contractors on such a large scale was not always a success especially on the subject of Government Furnished Equipment. Future contracts must be written such that they require all entities performing services of the army, controlling government equipment, to utilize army property accountability systems. Also, contractors provided with GFE must be held financially liable for such equipment to the same standards as units. Additionally, probably the biggest



issue concerning strategic exit is re-establishing property accountability and inventory control over theater provided equipment after years of conducting military operations. While originally designed to simplify the logistics of deploying units by reducing the amount of equipment shipped into and out of the theater of operations, the use of TPE created additional challenges. Both US and Dutch armed forces learned hard and very expensive lessons on this subject. In future operations, property handed from one unit to another should be transferred to existing property books. Maintaining separate property books for TPE and unit equipment is duplicitous and unwanted. Maintaining property accountability is far easier than re-establishing it once lost.

3. *Visibility* concerns container management and Intermediate Staging Base (IBS). The managing of shipping (commercially owned) containers has been a long-standing challenge for both US and Dutch armed forces, a challenge that is particularly acute during this type of contingency operation because of the huge number of containers involved. To solve the problem of container management, the Dutch DOD developed a stand-alone fleet management system for containers (derived from Mission Specific Logistic Instruction ISAF, 12th July 2013). The most significant difference between the war in Iraq and the one in Afghanistan was having Kuwait as an ISB to receive and stage the retrograde (Banian 2013). The good road network leading directly to Kuwait provided operational flexibility by enabling the command to retain up to half of its maneuver force in Iraq until the final withdrawal in the Fall of 2011. In contrast, Afghanistan is landlocked, has primitive road networks, is covered with extremely challenging terrain consisting of high mountains, and experiences strong weather conditions. None of the neighboring countries allow easy access or are willing to serve as an ISB, which decreases flexibility and increases cost, complexity, and risk to meeting time constraints. To conclude the cases, all lessons learned examples illustrate the challenges associated with conducting a strategic exit from a theater after a long duration campaign. While technological innovations have improved the ability to provide better visibility of movements and aid in planning retrograde operations and reconstitution efforts, the tasks associated with a successful exit remain daunting and require thorough preparation. Planners at the operational level must recognize that planning for a strategic exit of forces must involve more than just the logisticians in an organization.

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## Deep Dive Theme 2: Supply Chain Security Management

Our definition of military logistics depicted multiple interdependent practices: arranging for input of people and resources, processing these and ensuring their availability, and usefulness for operations. This interdependence usually spans geographical distances as well, with an industrial base supporting a military operating elsewhere. A tension – contradictory requirement (W. K. Smith and Lewis 2011) – can be noted between the interdependent nature of logistics practices (including their external vulnerability on the input side), and the extreme, possibly prolonged,

demands of operations. Military practitioners and academics have repeatedly mentioned their awareness of this tension (Lindley-French and Boyer 2012; van Creveld 1979). Our second deep dive therefore concerns supply chain security management. The section is based on a more extensive and specialized chapter on supply chain security management (van Kampen et al. 2016).

Major crises such as the current 2020 Corona pandemic have revealed a lack of preparedness of supply chain (SC) managers towards disruptive events (Sheffi and Rice Jr 2005). Such crises may have intentional (realm of security) or unintentional (natural disasters or pandemics) origins and induce various types of risks affecting supply chains. Given our focus on military logistics, we limit ourselves to risks stemming from security concerns (van Kampen et al. 2016). Security should be part of SC design and management processes, transportation hubs, and flow of goods and people.

This is far from new. Already in the Middle Ages the French King Charlemagne developed a logistic system that included a supply train that held enough supplies and equipment for several weeks campaigning, fortified depots along the line of march, and lines of supply that were protected by strongholds in frontier areas (burgs). This enabled him to campaign for extended periods of time up to 1000 miles from the center of France and maintain armies in the field or in a siege during the winter, a feat almost unknown since the end of the Western Roman Empire. The poor logistics of Frankish armies up to that time meant they could not project military force very far and usually dispersed after only a short period (J. E. Smith 2018).

For the most part, researchers have examined security as a generic concept in the commercial world (Hameri and Hintsa 2009; Natarajathinam et al. 2009). But what does security mean for military supply chains? We explore theory and practice of security risk management in defense supply chains.

## Theory

Supply Chain Security Management can rely on risk management (approach 1) or adaptive capability (approach 2). We present these as alternative approaches since they reflect different logics (Thornton and Ocasio 2008). The former takes a supply design (structure) for granted and then explores risks (think of exploitation in ambidexterity theory (Simsek 2009)), the latter puts entrepreneurial agency center stage (exploration). Military organizations often harbor specialized units that enact these two approaches.

**Risk-Based Supply Chain Security Management (Approach 1).** SC security concerns protection of supply chain assets from threatening human agency and to keep supply chain activities separated from illegal human agency (Closs and McGarrell 2004). SC risk refers to the likelihood of SC outcomes being susceptible

to disruption (Closs and McGarrell 2004). The process for managing SC security is called SC security management (SCSM), which serves as a means to prevent and mitigate SC security risks, while the more comprehensive process of managing SC risk is known as SC risk management (SCRM). SCRM reduces SC vulnerability by careful planning (Markmann et al. 2013). SCSM, as a subprocess of SCRM, seeks to prevent or counter threatening actions such as damage (Markmann et al. 2013).

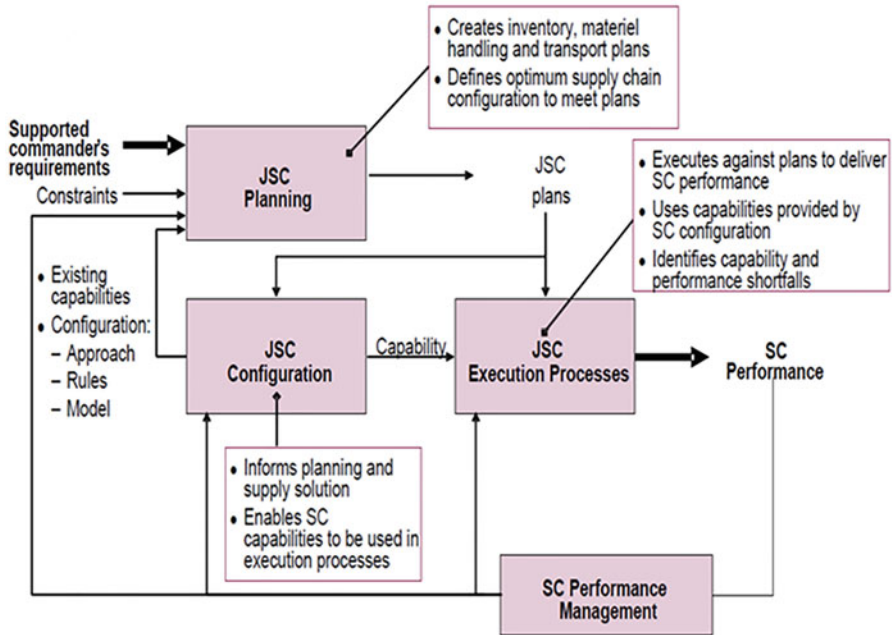
### **Supply Chain Security Management and Adaptive Capability (Approach 2)**

While the former approach provides an organization with a framework for understanding SC security risks and taking measures, it lacks insights in adaptive capabilities (Seifert and Langenberg 2011). For major crises, a more entrepreneurial approach to security management is warranted. The necessity to invest in an adaptive capability depends on the strategic urgency of SC and the likelihood of major crises (Nilsson and Waidringer 2004). Strategic urgency relates to the importance of items to military operations and external availability. It may increase when military end users of the supply chain have limited alternatives for the products they use and/or when the supplier base offers limited possibilities for switching. Increasingly, military organizations attempt to foster their adaptive capabilities at the network level (Flavin 2007).

### **Practice: Embedding Security Risks Management in Logistics Planning**

The military puts a lot of effort into the logistic planning, including security (van Kampen et al. 2016). SCSM starts as part of a comprehensive and detailed logistic planning process (see also left-hand column in Fig. 2). We first present an overview of the generic military logistic planning process (A). As part of this planning process, the (operational) SC planning is elaborated upon (B), followed by security risks management to assure logistic support (C).

- *(A) Generic Military Logistic Planning* (NATO 2010, 2013). Effective operational logistics is essential for military operation or mission. It requires a shared comprehensive understanding of the operational situation, starting at the beginning of the planning process. Early in the planning process, the Logistic Operational Planning Group Team (LOPGT) lacks the required information to design the “best” SC plan. (DOPS/J4 is in the lead of the LOPGT within Dutch MoD) LOPGT can refine however during the subsequent stages of the planning process, including addressing risks – both safety and security.
- *(B) Operational Military SC Planning*. The logistic planning process (A) can be transformed into a generic SC planning model (MoD 2015a, p. 7), see also the generic level in Such a model encompasses the sequence of activities of the planning process. The UK Defense Equipment and Supply (DE&S) Department (MoD 2005) developed a generic SC planning model (Fig. 4), underscoring the need for operational SC plans to ensure that the supported commander’s demands



**Fig. 4** Core activities essential to achieving a reliable and effective SC planning (MoD 2005, p. 15)

are addressed (i.e., assured logistic support) (MoD 2005, p. A-23). The iterative model can be used under various levels of time pressure and it includes SC security risk management.

- (C) *Operational Military SC Security Risk Management* (NATO 2013, pp. 3–56). Effective security risk management (approach 1) is important at every level of planning (MoD 2005, p. 44). Proactive adaptive capabilities (approach 2) could underpin strategic performance improvement, including security. The latter proves challenging for commanders: they cannot easily adjust demand or sourcing.

## Exploring the Future of Military Logistics

We conclude our chapter on military logistics with innovation and challenges.

**Innovation** Traditionally, military logistics has been impacted by operational innovations aimed at information advantage and coordination and execution of (non) kinetic effects. In an inverse manner, logistics shifts to an innovative-challenging role when it is inclined not to primarily support fuel-consuming energy production systems, but proposes, for instance, alternative energy sources to make bases cheaper, more independent, and more environmentally friendly. Or it can sustain

special forces with intelligent drones in ways that could inspire new operational concepts.

Future operations are likely to involve multiple domains and focus on critical infrastructures (some without clear geographical sites), symbolic-meaning networks, and urban areas. Success will depend on decision and information superiority across multiple domains of battle.

**Challenges** Current logistics within military organizations faces internal and external challenges. First, internally, military logistics organizations tend to rely on concept development sequentially following operational concept development. Logistics is understood in terms of fixed concepts and its organization tends to be fragmented across multiple units and shared service organizations. It is focused on reactive, plan-based execution rather than innovation-oriented exchange with strategy, operations, and external partners. Some even state that “civilian logistics has surpassed military logistics” (Rutner et al. 2012). Military organizations struggle with the prolonged time (multiple decades) it takes to develop, acquire, absorb, and use/maintain new technologies, including “soft technologies” such as new logistics concepts developed elsewhere (e.g., last mile logistics concepts). This widens the gap between logistics and the fast-moving operational organization it wants to serve.

Second, externally, logistics innovation involving external partners faces multiple hurdles along the way. Military organizations collaborating with national or international partners may try to bring together latent capabilities (van Fenema and Romme 2020). Yet in reality, they face difficulty when trying to collectively improve networked logistics. Problems include collaboration challenges (Brown and Coryell 2013), turf wars, and problematic learning and mutual adaptation. New concepts do not guarantee success. For instance, efforts to change relationships with suppliers towards Performance Based Logistics suffer from deteriorating performance and control problems (Mahon 2007). Laudable initiatives such as NATO’s Operations Logistics Chain Management (OLCM) project struggle with nations’ willingness to share logistics information. Despite a so-called collective responsibility, members seem unwilling/unable to change the current national way of doing logistics into a truly collective logistics approach.

All in all, military logistics’ innovation and challenges change in the current era with its security, global medical and economics problems, and transformative digital technology. We expect cooperation to proceed in small clusters of nations and organizations, yielding increasingly sophisticated logistics concepts and practices.

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## Conclusion

This chapter introduces the practice of military logistics as it relates to commercial logistics, military operational art, and political decision making. These relationships make sense given the *conditio sine qua non* nature of military logistics for military

efforts. Military logistics can be viewed as a pragmatic endeavor (which activities are required and how are these organized). To extend this view, this chapter shows process-structure and generic-specific dynamics. Moreover, deep dive themes contextualize military logistics (strategic alignment or what-for questions) and examine the role of supply chain security management in the light of logistics-operations tensions. Our present era seems to stand between historically known kinetic military operations and a still unknown digital future. This transition presents formidable opportunities and challenges for military logistics. Instead of harboring a reactive, servant, and internally oriented stance towards operations of a known structure but with uniquely configured elements, the practice needs to open up and change. Reconsidering its foundational assumptions, relationships, and contributions, military logistics will develop complex predictive capabilities and build networked capabilities. In this process, military logistics will give primacy to the digital realm. Research in military logistics will shift from planning and optimizing towards interdisciplinary studies that marry operations research, analytics, innovation management, and novel forms of organizing inspired by networks, platform, and eco-systems (van Fenema et al. 2021).

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# Hybrid Organizing in the Military Domain

Joseph Soeters

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## Abstract

This chapter deals with the increasing development toward hybridity in organizations. This development can be seen in all of the organized world, including the military. Organizational hybridity refers to the dynamics that come along with the confluence of different organizational logics, varying organizational forms, and diverse identities within one single organizational configuration or close network of organizations. Such hybridity may pertain especially to the coming together of profit- and not-for-profit organizing principles; of private and public organizational values; and of standardized work and innovative, explorational work.

In the military, hybrid organizing is traditionally known because of the distinctions between the various services (army, air force, navy, coast, space, and cyber) and the differences between wartime and peacetime conditions. More recently, new confluences of different organizational logics in the military have asked for attention:

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J. Soeters (✉)  
Emeritus professor of organizational sociology at the Netherlands Defense Academy and Tilburg University, Vught, The Netherlands

- Standard combat and control operations versus specialized operations.
- Operational units in combinations of different nationalities.
- Civilian and military organizations working together in the area of operations.
- Professional military, reserve military, and civilian personnel constituting the whole of the military organization.
- Arrangements of profit- and not-for-profit activities in the military.

This chapter argues that hybrid organizing is likely to stay within the military domain. This is not a bad thing per se, but it certainly needs extra managerial attention as it creates opportunities and challenges for the military organization at the same time.

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### Keywords

Organizational hybridity · Organizational / institutional logics · Military operations (standard/specialized) · Multinationality · Civil-military cooperation · Professional / reserve / civilian personnel · Non-profit organizing

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## Introduction

As long as the military has existed, people have debated about changing and further developing the armed forces (e.g., Segal and Wechsler Segal 1983). There was always the push for change, i.e., the pressure on military organizations to become bigger, faster, stronger, more efficient and cost-effective, technologically more advanced, more resilient, and in fact more lethal than adversaries. Also, there were views that pointed at the variation and development in tasks the military was set to do. Does the military have specific, narrowly described tasks, or should the military do everything (Brooks 2016)? And there were different and varying views about which people should conduct military tasks. Men of course in the first place, as the interest among women to become a soldier has been comparatively limited. But which men? Conscripts? Volunteers? Perhaps military personnel from other nations than one's own? People outside the military such as reserve soldiers? Perhaps even people who are employed by for-profit organizations, a new sort of mercenary soldiers? Questions and debates all over.

However, in concordance with analyses of organizations in general (Hannan and Freeman 1984), there have also always been contradicting voices that stressed the importance of stability and the importance of *not* changing the military. Those voices argue that the military core is unique and good as it is, and that its unwavering, stable presence and structure are essential for the security and well-being of nation and citizens. Such message was voiced even fairly recently in an academic journal, albeit not without criticism (Hasselbladh and Yden 2020; Soeters 2022).

But such a countercurrent does not preclude that military organizations have gradually developed, so it seems, into rather normal, conventional organizations (e.g., Norheim-Martinsen 2016). If this is true, then it must also be true that military

organizations are facing similar pressures to transformation and innovation as civilian organizations do (Holmberg and Alvinus 2019). After all, all organizations including the military are influenced by external constraints and opportunities (Pfeffer and Salancik 2003; Soeters 2020).

In most recent years, organizations see themselves confronted with competing institutional, regulatory demands from the outside world and corresponding incongruous pressures on their identity. Most importantly, nonprofit and public organizations experience the urge to become more aware of the business options of their activities. *New public management* has been a key word in this regard since the 1980s (e.g., Denis et al. 2015). To become more effective, public organizations seek ways to learn from managerial approaches in for-profit companies. On the other hand, profit organizations feel the need to express their social responsibilities such as developing inclusive human resources policies and becoming more aware of challenges concerning the environment and sustainability. Some of these tendencies are the result of changing sociopolitical values and insights in societies at large, whereas some are the palpable consequences of laws and regulations at different levels of public administration. This is managing in the “new normal” (Ahlstrom et al. 2020).

These developments in the civilian world do not leave military organizations unaffected. The military, as a public organization per se, feels the urge to become more efficient and cost-effective, but at the same time more flexible and adaptive to respond to the continuously changing demands they face during the preparation, continuation, and ending of operations. The character of conflicts changes all the time, which requires the military to be aware of the need to adjust according to the circumstances. And indeed, the military (particularly in the western hemisphere) also needs to demonstrate social, ethical, and environmental responsibilities. Hence, the emergence of hybrid organizing in the military domain. This asks for academic and professional attention, providing this is the aim of this chapter.

The chapter starts with an overview of the theoretical insights that have been developed in organization studies with respect to hybrid organizing. Thereafter, we will turn to the military in its changing task environment, after which we will discern various dimensions of hybrid organizing in today’s military. We will close with a sketch of solutions and conclusions to deal with the challenges that ceaselessly arise in this connection.

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## What Is Hybrid About Hybrid Organizing?

Organizational hybridity can be defined as: “the mixing of core organizational elements that would not conventionally belong together” (Battilana et al. 2017: 138). Core organizational elements in this context may be equalized with identities, organizational forms, and *institutional logics* within the organization. This latter concept goes back to the idea of the French organizational sociologist Lucien Karpik, who as early as the 1970s spoke about *logiques d’action* of large industrial firms. He used this concept to demonstrate the differentiated ways in which big companies operate according to their preferred logic(s) of action, be they power

related, money oriented, innovative, adaptive, technical, production focused, or prestige oriented (Karpik 1972: 89).

Baccharach, Bamberger, and Sonnenstuhl (1996) applied this idea in their analysis of an organizational transformation process in the airline industry. They discerned different logics of actions at different levels of the organization. Due to changes in the organization's environment leading to deregulation, top management introduced changes in an airline carrier to increase cost-effectiveness. They did so by speeding up actions on the ground and in the air and through mergers with other firms. In response, middle management and unions increasingly became concerned about the impact of work pressure and job uncertainties on the mental well-being of their workers (in particular the flight attendants). They adopted a different, confrontational logic of action, including engaging in real labor disputes. This caused serious troubles, which led management and operators to seek ways of cautious cooperation, in the end heading to stronger forms of cooperation between top management and lower levels in a sort of brittle coalition. This way the two unlike logics were aligned.

This example from the US airline business demonstrates that institutional logics refer to different motivations, identities, and societal rationalities – different organizational philosophies so to speak. These express themselves in the organization's goals, strategies, forms, and authority structures, as influenced by the organization's context and regulatory environment. One definition refers to institutional logics as “socially constructed historical patterns of material practices, assumptions, values, beliefs and rules” (Thornton and Ocasio 1999: 80). Defined as such, the idea of institutional logics is very close to the concept of organizational cultures. But, in particular, the connection with laws, regulations, and grand politics as well as its emphasis of the organization's *raison d'être* makes the idea of institutional logics somewhat different from the concept of culture. Yet, the two concepts are clearly related (e.g., Hinings 2012).

As said, hybrid organizing particularly refers to the coming together in one organization of different, oftentimes competing, institutional logics. Today, this frequently relates to the encounter of business logics (e.g., efficiency and profitability) and public logics (e.g., sustainability, inclusiveness, and social equality) in one and the same organization. In previous days, actually not so long ago, it was said that the commercial and the public logic are really different philosophies, and that never the two would meet because “monstrous hybrids” would result (Jacobs 1992). In this view, at the one side, there is the “commercial moral syndrome,” in which it is important to shun the use of force, to come to voluntary agreements, to be efficient, thrifty, and optimistic, and to invest for productive purposes. At the other hand, there is the “guardian moral syndrome,” in which it is essential to shun trading, exert prowess, be loyal to and respect hierarchy, and show fortitude (Jacobs 1992).

Indeed, managerial attitudes at both sides seem to differ considerably (Noordergraaf and Stewart 2000), but nowadays, they seem to diverge less than say twenty-five or more years ago. In fact, in today's world the two domains do meet,

and quite often too. This is not without reason: There are benefits to be gained by hybridity such as more resources, more innovation, and more creativity in the organization (Battilana et al. 2017: 139). Public or social organizations, for instance, may be able to acquire funding from market investors, whereas for-profit organizations may benefit from having a profile of social and environmental awareness. However, hybridity in organizations may also come with negative side effects. If this happens, organizations become “by nature arenas of contradiction” (Pache and Santos 2013), possibly creating internal conflicts, conflicts of interest, competition, and a loss of external legitimation (Battilana et al. 2017: 139).

A clear and often mentioned example of hybrid organizations refers to the phenomenon of social enterprise, an example of which can be found in the field of job placement. During the emergence of the so-called welfare state in the 1950s and later, job placement was an affair of public agencies. Later, as of the 1980s, commercial employment agencies gained more and more impact threatening the former public labor market agencies to become more or less redundant. In some countries one has tried to integrate both types of agencies into one, which came about by *selectively coupling* intact practices from each logic, not by mixing or blending them (Pache and Santos 2010, 2013; Pache and Thornton 2021). Another example of organizations being confronted with different logics and demands from the outside world are hospitals that are pressurized to become more efficient and commercial, making the mere professional side of medicine less prominent. This leads to tensions and challenges due to the coming together of different organizational logics and professional identities – medical doctors versus cost accounting managers so to speak (Haveman and Gualtieri 2017). Similar tensions have been observed between professional musicians and the managers of a symphony orchestra, to give another example (Glynn 2000).

A particular example of hybrid organizing has emerged in the phenomenon of the so-called extended enterprise. This concept refers to firms that develop strong ties with their suppliers and key customers in order to increase general effectiveness, decrease total systems costs, and to gain more flexibility and better quality and customer acceptance (Spekman and Davis 2016). This concept also includes considerations of risk. Risk sharing (of investments, for example) is one of the side goals of the concept of the extended enterprise. Another important goal is to increase the organization’s potential to adapt to varying circumstances, for instance varying degrees of demand. At some point of time, more output may be needed than at other times. The capability to increase or decrease production or servicing capabilities on a rather short notice is an important asset of the extended enterprise. No matter how promising, all this does not come without challenges: Barriers to collaborations may emerge because of unwillingness among partnering organizations to share information, a lack of trust, perceptions of absence of mutuality and symmetry, and doubt about the fairness of benefits, costs, and risk sharing (Spekman and Davis 2016: 43). Clearly, managing hybridity does not come easy.

## Hybridity-Related Challenges in the Military

The military is used to work with dissimilar logics of action, identities, and structures in the organization as they consist of services that are essentially different because of the physical dimensions and technologies they work with. Operations on the ground are essentially different from air forces' missions (e.g., Mastroianni 2005), not to mention the differences between land operations and military actions on the seas and oceans, or in cyber and space. But these differences have existed for long, and they are incorporated, institutionalized so to speak, in the overall military organization and its cultures (e.g., Soeters 2021). Also, the differences between peace and crisis/war conditions have been known and dealt with since ages, just like the differences between combat and support units. More recent and challenging at the moment, however, are the following five forms of hybridity.

### 1. *Hybridity in task orientation: conventional troops and special forces*

In response to the rise of high-impact terrorist attacks, such as on 11 September 2001 in New York and Washington D.C., politicians worldwide have boosted the capabilities of special forces in the military. Much more than regular forces, special forces are seen as proper means to combat dispersed terrorist networks that operate internationally with terrifying and lethal effect. Special forces' resources and workforces have increased substantially, and their importance has grown over the past decades (Glicken Turnley et al. 2018). Special operations forces (SOFs) know relatively flat hierarchies; they are smaller, more flexible, lighter on their feet, and they can act more quickly and adapt easier to changing circumstances. Hence, they are considered to be better intelligence gatherers and more apt strikers, which makes them more suited to stop terrorists waiting and preparing to execute their deadly plans.

The "rise of SOF power" does not come without new concerns, however. For sure, SOFs have their own logics of action that do not directly align with the conventional forces' way of doing things. Growing SOF power therefore creates more hybridity in the military, and it enhances the possibility of collisions within the military organization, with possibly severe operational consequences (Horn 2004).

SOF's time orientation, for instance, is different from conventional troops' time horizon, and so is their focus on secrecy. As a result, the communication and distribution of important operational information is well developed among the special forces themselves, but less so between the special and regular forces. Simply put, the SOF operators trust only themselves. This occurs even if the SOF and regular HQs are more or less adjacent to one another, such as at the time in Kabul during the Afghanistan operations (Resteigne and van den Bogaert 2017). It may lead to conventional forces not knowing what the SOFs are doing at the same time, in the same area of operations.

Another concern is the lack of civilian and political control. SOF operations, of course not all of them, may escape the attention of politicians because they are kept secret in order to increase the chances of success. This makes sense. Yet, the



more secrecy there is in military operations, the less effective civilian and political control is likely to be. A third effect of this kind of hybridity in the military organization relates to the internal competition for funding. As SOFs are seen as more effective, they tend to receive relatively more resources to grow their organizations and conduct more operations. This may come at the expense of conventional troops' resources and hence create feelings of relative deprivation among them. A final concern is of a cultural nature. In SOF units, external discipline (attire and saluting) seems laxer, which may irritate conventional forces. Also, respect for conventional forces leaders seems less well developed among SOF operators, as they are trained in a cult of elitism and exclusivity (Horn 2004: 9). This relates back to the observation that SOFs trust only themselves.

## 2. *Hybridity in national and operational military orientation*

A second, fairly recent form of hybridity in military organizations relates to the growing interconnectivity of troops from various countries in operations. The multinational character of military organizing as standing forces, but more explicitly in large-sized exercises and operations, is on the rise, and this development is unlikely to disappear. Sharing costs, risks, and personnel, and gaining more general external legitimacy are the main benefits of the increasing multinational character of military affairs. About this development and its corresponding challenges, a lot has been written (e.g., Soeters 2021; Ruffa and Rietjens 2023), which does not need to be repeated here. Clearly, the more this form of hybridity gets familiar, the more the challenges and problematic sides may be expected to minimize. Experience does it. Yet, there is one issue that asks for special attention in the context of managing hybridity.

In the footsteps of others, the American scholar Travis (2020) distinguishes two views of security, named “absolutist” and “pragmatist.” These views translate into operational styles and preferences of the military in a nation. The “absolutist” view or operational style stresses the perpetuity of hostile threats and the need to eliminate those. This view is likely to result in large investments in heavy weaponry as well as in regular campaigns or invasions in order to retaliate, dominate, or conquer others' areas. Victories are the ultimate aim and the definition of military success. It is, if one wishes, the military old style. The “pragmatist” view or operational style, on the other hand, sees the military as one instrument next to others in the domain of international relations. Nations that prefer the “pragmatist” approach are more reluctant to use military means to solve international problems. If military means are used, this is likely to be done in a restrained manner, such as in the participation in stabilization operations and UN missions.

This distinction is important because, as it seems, some nations are more disposed to the “absolutist” view, and others seem to be more inclined toward the “pragmatist” view. Nations that came out of World War II victoriously, such as the USA, the UK, and Russia – the decision-makers about Europe post-World War II at the Potsdamer Conference in the summer of 1945 – tend to prefer the “absolutist” view. This can be deduced from their actions over the last couple of

decades and from their relatively high expenditures for the military. Other countries, such as most continental European countries, are more inclined to the other “pragmatist” view and approach (Soeters 2021). This obviously creates differences and the challenges that come along with hybridity in multinational military cooperation: internal arguments over goals, competences and capabilities, prestige battles, loss of external legitimacy, and ambiguity in decision-making about what needs to be done.

Most likely, a convergence between those two views and styles will occur in alliances of collaborating national forces, such as NATO. Yet, for the time being, nation-related hybridity seems to remain. During the operations in Afghanistan, this type of hybridity manifested itself in a task division that reflected the different national views – the “absolutist” national forces from Anglo-Saxon countries predominantly doing the combat job in Southern Afghanistan, whereas the “pragmatists” mainly carried the burden of the other jobs. Yet, as a consequence of Russia’s invasion in Ukraine in early 2022, most nations in continental Europe became convinced that a more classical, “absolutist” approach was inevitable, including a sharp rise of budgets for the military in almost all of these countries. Hence, for the moment NATO-wide emphasis is balancing toward “absolutist” thinking. This may be temporary, though.

### 3. *Hybridity in actor orientation: civil-military cooperation*

Fitting more in a “pragmatist” view of the military are peacekeeping and stabilization missions and relief operations in times of war, crisis, and disaster. Such missions are likely to benefit from the military working together with civilian organizations (e.g., Lucius and Rietjens 2016). Such partnering is particularly useful in the field of refugee and disaster relief (in camps for instance), providing immediate assistance, more specifically shelter and health care as well as food and water distribution; in a longer timeframe civil-military cooperation is also valuable in (re)constructing physical infrastructure as well as repairing the social and political fabric of a nation. In general, these civilian parties are nongovernmental organizations, abbreviated as NGOs. Such civilian organizations may have an international and/or Western background, such as the Red Cross or Doctors Without Borders. But such civilian organizations may very well also have a host-national background. The host-national character of partnering organizations is likely to provide substantial benefits because it narrows the gap with the beneficiaries. Yet, it also often enlarges the dynamics of hybridity in civil-military working relations because of language and other cultural issues.

A lot has been said before about the challenges that come along with getting civilian and military organizations working together. This obviously starts with the awareness that one needs each other to get the job done. The military, for example, can provide logistics facilities to bring people and material where they are needed or best placed. From there on, civilian organizations can take up the job that needs to be done. But even if all stakeholders are aware of this interdependence and see the benefits of partnering, which is not always the case, challenges remain. Often controversies emerge with regard to the demarcation of working domains, the formulation of operational goals, the visibility of

forceful means, and general views about how things are supposed to be fixed. Reaching consensus about tasks and approaches is a prerequisite for civil-military cooperation to be successful (e.g., Bollen 2002). This form of managing hybridity in an organizational configuration, such as in a network of collaborating organizations, is challenging but not impossible. Many experiences all over the planet demonstrate how successful such cooperation may be. As said elsewhere, civil-military cooperation is a matter of “divergent interests, yet convergent action” (Lucius and Rietjens 2016: 169 ff.). Hybridity in such civil-military cooperation requires that coordination takes place with trust and control, mechanisms that seem opposite but can work complementary and in a mutually reinforcing way (Kalkman and de Waard 2017).

One more remark needs to be made about national forces with an “absolutist” view needing to work with national forces with a “pragmatist” view as well as with civilian organizations. It is no secret that the US forces prefer combat and real war fighting and have much less feeling with operations other than war, such as stabilization or peacekeeping missions (e.g., McFate 2018: 20 ff.). Except for providing immediate disaster relief, US forces (and they are not the only ones) are not really comfortable with more structural civilian-military cooperation such as a number of European allies tried to achieve in Afghanistan (e.g., Beeres et al. 2012). For US forces, this type of multiple hybridity, distracting from “real combat,” simply was, and probably still is, a bridge too far.

#### 4. *Hybridity in personnel: professional military, reserve military, and civilian personnel*

Because the draft system has been abolished in most Western armed forces, professional military personnel has become the main element of the military’s human resources. However, due to the increasingly felt need for the military to intervene in all sorts of activities (Brooks 2016), professional military personnel are oftentimes overburdened; they are also too expensive for mundane jobs, and sometimes not qualified enough to provide the expertise knowledge that is required (e.g., information technology, general technology, and cost accounting). In order to conduct all the actions that are asked for, the military organization feels the need to work according to the notion of the *total* or *adaptive force*. This notion accentuates that the military’s human resources are more than the professional military core. The military just as much relies on reserve personnel and civilian personnel. In terms of human resources management (HRM), this creates hybridity.

Although reserve personnel are often former professional military (wo)men, they are likely to have developed new interests, skills and positions after they have left the military. They can be referred to as *transmigrants moving between the civilian and military organization* (Lomsky-Feder, Nazit and Ben-Ari 2008). Reserve personnel have one leg in the military organization and the other in civilian working life. This provides them with insights and views that may differ from professional military personnel, and, in fact, they may have a somewhat ambiguous attitude toward what the military traditionally does and how it behaves. Depending on the situation, this may work out as a weakness or a

strength; it is a weakness if stability and consistency is required; it is a strength if innovation, new ways of doing things, is needed because old approaches do not suffice to clear the job. In any case, it is about managing hybridity. Reserve personnel may also see the military service as “serious leisure” giving them a legitimation to stay away from family and household responsibilities (Castignani and Basham 2021). This is not unproblematic either, as it questions the reserve soldiers’ real motivation to participate in the military during “serious operations.”

Another category on which the military organization heavily relies is civilian personnel. Civilian personnel are employed by defense organizations to conduct general tasks that are not specifically military, such as administrative or cleaning jobs, or that, on the contrary, require very specific expertise that the military is unable to provide for themselves; IT personnel or researchers, for example. In general, military and civilian personnel face different operational, general work and wage conditions. It is important for military organizations to deal with this specific type of hybridity in a manner that increases feelings of fairness among both, indispensable, categories of the total defense work force (Goldenberg, Andres and Resteigne 2016).

#### 5. *Hybridity in money orientation: public and private*

This probably is the most difficult form of hybrid organizing in the military, as it is as new as controversial as we saw before (Jacobs 1992). Contract soldiering per se is not a new occurrence, as we have seen merchant soldiers acting in military operations already centuries ago. Yet, the mixing of contract soldiering within ordinary military operations is a rather recent phenomenon. This started with the outsourcing of specific military tasks in operations to private military companies (PMCs), which became a common practice in the US military – but not only there. The logic of this approach relates to the perceived benefits of increased flexibility (easier inception and termination of actions and contracts). It also relates to the fact that the costs for PMCs do not necessarily burden the governmental defense budget, and a final aspect is the reduced political visibility of the PMCs’ decision-making and conduct (Schaub and Kelty 2016; Soeters 2020: 101–103). The latter two aspects, for instance, play a large role in the activities of the so-called Wagner Group financed by the Russian State. This latter organization also showed that things may go out of hand, in a way that the sponsors may not like.

Here, the concept of the *extended enterprise* (Spekman and Davis 2016) is particularly relevant for the military. As said, this concept refers to the idea that organizations no longer can only rely on their own resources but need to incorporate external partners to respond to changing external demands. As we saw in the previous point, this firstly leads to the use of reserve soldiers, which is a phenomenon on the rise. As to health care services, for instance, most military forces have a need to expand or shrink their medical capabilities according to the operational circumstances. When there is an urgent need, reserve medical personnel that ordinarily works for civilian hospitals are used to fill the gaps in operations overseas. For this to be possible, contracts with civilian health care providers in the parent society, medical centers or hospitals, are signed, which

obviously creates money issues. The idea of the *extended enterprise* – or *total force* in the military – particularly applies to cooperating with commercial partners in supply chains that give organizations the flexibility to grow or shrink their capabilities according to the demands of the time. For the military, this may refer to work activities in the field of guarding and protecting premises, transports, and logistics, and the maintenance of devices, such as vehicles and IT systems. Working with such business contractors does not come without problems, though. These may even have serious operational consequences. If business contractors operate satellites that are needed for missiles to target specific hostile goals, and for whatever reason they refuse to collaborate, managing hybridity in the military becomes a very urgent matter. More in general, Lindy Heineken (2014) expressed doubts about the advantages that commercial partners in the military are said to have. One small incident with fairly large political consequences may illustrate the point.

Soeters, de Gooijer, van Fenema, and Oliveira (2021) analyzed an incident involving a reserve officer deployed by the Netherlands army to the operations in Afghanistan. In civilian life he was an expert in information technology working for a commercial company. During his deployment he was double employed, so to speak. This of course was organizational hybridity par excellence. The assignment he had received for his mission was exactly in his field of expertise: to make an inventory of the IT systems in the area of operations and suggest ways to improve its performance. His report and recommendations were well received by the military and the MOD. Yet, this positivity suddenly changed when a TV documentary was broadcasted that presented this case as an example of unwanted intermingling of commercial and public affairs. The reserve officer was said to favor the company that employed him by recommending improvements that could only be done by companies such as his employer. The TV program created enormous upheaval nationwide as well as in parliament. Almost in panic, the minister of defense instigated a legal investigation and immediately stopped the working relations with the company that had provided the reserve officer. Other IT companies, in turn, became reluctant to work with the defense organization, making the already substantial IT challenges in the defense organization even more problematic. The reserve officer was discharged from his military duties but he nor his company were found guilty of fraud. Obviously, this crisis ruined the confluence of private and public capabilities in the field of IT-related defense, both at home and overseas (Soeters, de Gooijer, van Fenema and Oliveira 2021: 176).

So far, our description of hybridity-related challenges in military organizations or configurations of collaborating military organizations occurring as a consequence of perpetually changing and often conflicting demands from the outside world. For sure, these are not the only challenges in this regard, but they certainly are among the most impactful developments to date. The question then is how to manage these developments and prevent dramas as the one we just saw.

## Solutions and Conclusions

There are several ways for organizations, including military organizations, to come to grips with conflicting demands from the outside world necessitating the emergence of hybrid forms of organizing. It urges the military to become an adaptive organization. For sure, handling the challenges and opportunities of hybrid organizing is a test in itself.

There is one factor that diminishes the challenges related to hybridity in the military organization occurring due to changing external conditions: This is a new change of those external conditions themselves. To make this more tangible, one only needs to remind that the rather sudden rise of SOFs, creating and accelerating new forms of hybridity in the organization, was related to the threat of dispersed terrorist networks. Yet, with Russia's invasion in the Ukraine in 2022, it became immediately apparent that the capabilities of conventional, regular forces are still enormously significant, hence boosting those troops' feeling of relevance and mounting their material and human resources. The latter, the sudden rise of financial means for the military since 2022, may also lessen the need to seek collaboration with for-profit organizations. Now again, the military have more income to better arrange for their own supplies, expertise, and personnel. This does not imply that these forms of hybridity are fully disappearing, but the intensity and scope of the challenges are likely to decline, at least somewhat.

Yet, other reasons and forms of hybridity tend to remain in the military in full scope, and they are as beneficial yet challenging as before. Therefore, it is important to pay attention to possibilities to manage the problematic sides of hybridity, such as internal competition and conflict, political battlefields inside the organization, and the loss of external legitimacy.

- (a) *Plural governance.* There are several ways to come to grips with the challenges that come along with managing organizational hybridity (Mair et al. 2015). First, organizations may opt for just one of the competing logics, leaving the other options for what they are. In case of social enterprises that are confronted with pressures to commercialize, these organizations may either go for their original social charter or completely shift toward commercialization. In such case, hybridity no longer exists as finding a compromise or an adequate balance between conflicting external demands or expectations is difficult (Mair et al. 2015: 730). If one actively rejects choosing between different logics – for instance because choosing is impossible – other options emerge (Mair et al. 2015: 731). Generally speaking, there are integration and differentiation strategies. Integration refers to the yielding of novel organizational forms and innovative products by synthesis of seemingly incompatible elements that become legitimized institutions in their own right (Glynn et al. 2021: 53). This approach may be effective but may come with strains in and among people in the organization. Differentiation strategies, on the other hand, allow space for different departments, units, or groups in the organization to perform according to their own values, logics, practices, and insights (Battilana et al. 2017: 145 ff.).

The latter is close to what has been referred to as organizational ambidexterity, which is being good at two different things – stable exploitation and innovative exploration – at the same time (O'Reilly III and Tushman 2008). As explained before, such differentiation has existed in the military for long, as a means to achieve more organizational and operational flexibility (Shields and Travis 2017). Differentiation is something the military bureaucracy is traditionally good at. But this comes with a cost: Managing the military in different services works well, but not when modern operations require the combined deployment and use of weapons systems. Hence, differentiation in itself can never be the only solution. Integration remains a challenge to cope with.

- (b) *Organizational demography*. This approach stresses the notion that changing organizations can best be done by changing who is in the organization instead of changing the people in the organization (Pfeffer 1985). This is an important idea, also for the military. It is no secret that military commanders are predominantly men who were trained in military academies and promoted through the own military ranks. This is likely to create uniformity in thinking and acting, from junior to senior; it is likely to create a certain inner directness that the military can ill afford to maintain in the future. The current awareness of the benefits of diversity may be particularly pertinent here (e.g., Soeters 2020: 188 ff.). Quite some people are convinced that on average women have a larger feeling for pragmatist instead of absolutist thinking, not only in military affairs, but more in general (Shields et al. 2023). If this is true, then it makes sense to recruit and onboard more women and promote them to higher military ranks with more decision-making power to handle hybridity in the military. But such considerations may also apply more generally. King (2010) in an analysis of the British operations in Afghanistan noticed that the arrival of an unconventional, newly established brigade and its staff (m/f) helped to realize a successful shift in approaching the hostilities and threats in the area of operations (the province of Helmand). The newcomers had previous experience in peacekeeping and stabilization missions as well in civilian domains, which helped to make the “absolutist” warrior approach of the British troops less dominant. This is the strength of reserve personnel and the advantage of rotating personnel among the various components (services, national/international, and types of missions) of the military. To repeat Pfeffer's statement (1985): Organizational change is more likely to occur by changing who is in the organization than by changing the people in the organization.
- (c) *Living with paradox*. Organizational life is full of paradoxes, i.e., apparent contradictions that denote elements that seem logical in isolation but absurd and irrational when appearing simultaneously (Lewis 2000: 760). Examples relate to organizational learning (critiquing and often destroying past understandings to construct innovative, more complex knowledge); to organizing (equilibrating opposing forces in order to encourage commitment, trust, and creativity and maintaining efficiency and order); and to dynamics at the group level (groups becoming more cohesive and influential by valuing the diversity of their members) (Lewis 2000: 765). These examples can also be recognized in the



military and can easily be translated to the forms of hybridity we discussed in this chapter before. The challenge here is to capture the enlightening potential of paradoxes. This can be attempted by confronting politicians' and commanders' own routines, defenses (and panic!), and learning to explore the natural ebb and flow of tensions in the organizations. Paradoxes may be learned to be seen as thought-provoking challenges in order to examine what tensions exist, why they last, and how such strains can be turned into new opportunities. What appears as counterintuitive and simply wrong may on deeper reflection be inherent aspects of today's organizational life (Lewis 2000: 774). In connection with demographic management, this is likely to be done more successfully by some than by others. At the end, novel arrangements are not unlikely to be accepted and legitimized by the outside world (Glynn et al. 2021).

If this chapter has contributed to a better understanding of hybrid organizing and managing in the military and how to come to grips with it, it has fulfilled its purpose.

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## Summary

This chapter aims to provide insights with respect to the simultaneous occurrence of different logics of action, values, and practices in one and the same organization or set of intensively cooperating organizations, in the military domain. This is referred to as organizational hybridity, which is needed to create an adaptive force. Acknowledging that the military organization traditionally has seen such diversity and hybridity in its different services (air, land, sea), the chapter distinguishes five other manifestations of hybridity in the military. These provide new opportunities for better performance in times of perpetually changing and sometimes conflicting external demands, but they also create challenges to prevent inside tensions, unhealthy competition, panic, conflicts, or political battles. Plural governance, different recruiting and onboarding, as well as accepting and making use of the potential strength of organizational paradoxes may help to cope with organizational hybridity in the military.

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## Cross-References

- ▶ [Challenges in HRM in Military Organizations](#)
- ▶ [Civil Military Relations: What is the State of the Field?](#)
- ▶ [Civil-Military Relations?](#)
- ▶ [Defence Management and Economics](#)
- ▶ [Management, Economics and Logistics in Military Sciences](#)
- ▶ [Peace support/building/enforcement Operations](#)
- ▶ [Veterans and Reservists: Views from Within and Without](#)



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# Military Women: Changes in Representation and Experiences

Brenda L. Moore

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## Abstract

Research on women in the military is becoming an increasingly important area of inquiry in the social sciences. Women are essential to the operation of contemporary armed services, and this has led to recent changes in organizational policies leaning toward equalizing the status of men and women in uniform. As the decades of the seventies and eighties witnessed an expansion in the role women would play in national defense, the twenty-first century is experiencing a movement toward parity between men and women in the military. This is the case not only in the United States, but in other nations as well. This movement toward gender equality is slow as it goes against the traditional social norms of most societies and is met with a number of obstacles. Although this chapter focuses primarily on historical and contemporary changes in the representation and

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B. L. Moore (✉)

Department of Sociology, University at Buffalo, SUNY, Buffalo, NY, USA

e-mail: [socbrend@buffalo.edu](mailto:socbrend@buffalo.edu)

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experiences of women in the United States armed forces, there is also a brief examination of armed forces of other societies.

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**Keywords**

Military · Servicewomen · Race and gender · Representation · Inclusivity · Sex segregation · Conscription · Propensity to enlist · War · Suicide rates · Sexual harassment/assault

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**Introduction**

The character of gender relations in the armed services has always been reflective of that which exists in civilian society. In many ways, armed services reflect the cultures of societies in which they exist. This is largely due to the fact that the military, like other organizations, is dependent upon the larger society for resources. Thus it is only effective to the extent that it meets the demands of various interest groups concerned with its activities. On the other hand, the military is unique in terms of its primary goal, national defense. History has revealed that cultural norms are sometimes overlooked in times of national crises (consider the large number of women who served in the British and US militaries and those who fought in the Soviet Union during World War II). Today, we are witnessing a change in gender norms; women have developed a strong political voice that has moved societies more toward gender equality. The military institution's coercive compliance structure has compelled service members to adhere to newly implemented gender policies over the last four decades. In the United States, legislative changes have led to the opening of all military positions, including combat, to women. Arguably these policies would not have been enacted had they not been consistent with changes taken place in the civilian society. This chapter discusses changes in representation and experiences of women in the US armed services and, to a lesser degree, women in other countries.

Since the 1970s, percentages of active duty service women have been increasing. The United States has witnessed a number of legislative changes leading to increased opportunities for women to serve in the armed services. These changes are partly attributable to anti-discrimination regulations in civilian employment which has led to changes in employment both in the labor supply of women workers and the demand side of the market. Title VII of the Civil Rights Act of 1964 prohibits discrimination on the basis of sex in employment-related matters. As a result of Title VII, more women entered the workforce in the United States. These women worked mostly in clerical or service jobs, but more were entering skilled trades and managerial positions. Additionally, the advent of the All-Volunteer Force required services to compete with the civilian sector for qualified personnel (Moore 2017; Moskos 2000; US President Commission 1970). Advances in modern technology as well as the end of the Cold War also help to explain the expansion of women in the military (Moore 2017).

## Early Trends: United States, Britain, and Soviet Union

Women in the United States have been officially serving in the armed services since 1901; with the establishment of the Army Nurse Corps. During the nineteenth century, they served mostly as nurses, cooks, and laundresses. A few disguised themselves as men and served as soldiers in male units, only to be removed from service after their sexual identities were revealed. For example, a woman named Deborah Sampson dressed like a man and entered the Continental Army. Reportedly, a Lucy Brewer served as a marine on the *USS Constitution* during the War of 1812 (Holm 1982; Segal 1989). Harriet Tubman served as a spy and a scout for the Union Army during the Civil War (Clinton 2004). An African American woman and former slave named, Cathay Williams, posed as a man and served with the *Buffalo Soldiers* in the 38th Infantry, Company A (Blanton 2007). A woman named Loreta Velasquez recruited and led Confederate soldiers in a number of battles during the Civil War (Segal 1989; Davis 2016). None of these women were officially members of the armed forces, and, regardless of how well they performed, they did not receive military honor because they were women.

Similarly, Mary Lacey, of Great Britain, disguised herself as a man and joined the Navy in 1759 and worked in the Naval Dockyard (Noakes 2006). Many women in Britain served unofficially as cooks, nurse maids, and a variety of services necessary to maintain fighting men. It is estimated that 20,000 women accompanied the British Army to the American colonies in 1776; many of whom were wives of soldiers (Noakes 2006:20). In 1860, the first Army Training School for military nurses was established by Florence Nightingale, and in 1866 female nurses were appointed to Military General Hospitals. It took another 18 years before the Army Nursing Service would come into existence in Britain (Noakes 2006).

During World War I, women again had limited opportunities to serve in the military, even though the armed services were suffering from an excessive manpower shortages. This was true in both Great Britain and the United States. In Great Britain, the National Union of Women's Suffrage Societies (NUWSS) organized the Women's Emergency Corps (WEC) in London. Through these organizations, British women were recruited to participate in the war effort by filling traditionally feminine positions as cooks, caregivers, and sometimes motor drivers (Harris 2003; Noakes 2006). The British Red Cross commissioned the First Aid Nursing Yeomanry to provide medical and ambulatory services for wounded British soldiers (Harris 2003; Noakes 2006). Unlike the United States, Britain created three auxiliaries in which women served as non-combatants during World War I. Approximately 90,000 British women served in the Women's Army Auxiliary Corps (WAAC), Women's Royal Navy Service (WRNS), and the Women's Auxiliary Air Force (WAAF) (Harris 2003; Noakes 2006:81). These auxiliaries would be demobilized after the World War I and would later be reactivated in 1939.

Comparable to Great Britain, the prevailing attitude on the part of the US War Department during World War I was that military jobs should be filled by men. The US Army admitted 20,000 women to serve only as nurses. The Navy and Marine Corps allowed a few women to enter as reservists to fill clerical occupations.

Approximately 12,500 women served in the Navy as yeomen and another 1400 served in the Navy Nurse Corps (Segal 1989). Approximately 14 African American women served in the military during World War I as yeoman (Miller 1995; Miller 1919). The Marine Corps enrolled 300 women to work in clerical positions (Holm 1982). These women were demobilized after the war without military recognition (Treadwell 1954; Segal 1989).

World War II created a need for large numbers of women to participate in the military around the world. Thousands of women in the United States volunteered for military service. Women in Britain were drafted into the military. The Soviet Union assigned women as combatants. Although these women played an essential role to the war effort, they were not viewed as equal to their male counterparts in uniform. By most accounts, women who served during the World War II did not aspire to compete with men. They were satisfied to do the jobs they were assigned in an effort to release men to fight the war (Treadwell 1954; Moore 1996, 2003; Noakes 2006). Britain formed an additional auxiliary, the Auxiliary Territorial Services (ATS), which was attached to the Army. The WRNS was reactivated and attached to the Navy, and the WAAF was attached to the Royal Air Force. More than 400,000 women are reported to have served in the British armed services during World War II (Noakes 2006: 131).

Similarly, the greatest number of American women – some 400,000 – served in a variety of noncombatant assignments during the World War II. The US War Department consulted with a representative from the British Information Service to determine how best to establish a women's auxiliary corps in the US military (Treadwell 1954; Moore 1996: 38). The Women's Army Auxiliary Corps (WAAC) in the United States was established in March 1942. The following year, the WAAC was converted to the Women's Army Corps (WAC), giving women temporary, but full military status. Women were also recruited by the Navy to serve in the reserve corps as WAVES (Women Accepted for Volunteer Emergency Service). The Marine Corps' Women's Reserve was established, as well as the Coast Guard Women's Reserve.

Women were assigned mostly in clerical and administrative jobs to free men for combat. However, a small percentage of women served in such nontraditional roles as parachute riggers, aircraft mechanics, and intelligence (Moore 1996, 2003; Treadwell 1954). Some 6000 African American women served in racially segregated units in a variety of military occupations (including medical, clerical, motor pool) during the war (Putney 1992:viii; Moore 1996). More than 850 African American women were deployed to Europe as part of the 6888 Central Postal Directory Battalion to redistribute years of backlog mail. Some Japanese American women, many of whom were recruited from US internment camps, graduated the Military Intelligence Service Language School at Fort Snelling, Minnesota, and were later assigned to work in intelligence (Moore 2003). Other Japanese American service-women worked in a variety of military occupations to include the medical, supply, and clerical fields (Moore 2003). Sociologist, Brenda Moore (2003) gives a detailed account of the experiences of Japanese American women in the military during WWII. Her book is based on indepth interviews with some of the women who served and extensive archival analyses. American women of all racial and ethnic

groups served in the United States and some in combat theaters overseas during World War II. These women were patriotic and for the most part did not question their role as noncombatants (Treadwell 1954; Moore 1996, 2003).

By contrast, over 800,000 women of the Eastern Front served in the military during World War II; many of whom were combatants serving in the trenches alongside men (Myles 1981; Saywell 1986: 131). Women in the Soviet Union served in many military specialties including members of the aircrews, tank crews, gun detachments, nurses, bomber pilots, and more. Three female air regiments (586 fighter aviation, 587 bomber aviation, and 588 night bomber units) were formed by a pilot named Marina Raskova for the Soviet Air Force (Saywell 1986). The 588th Night Bomber Regiment became part of the fourth Air Army and was given elite status (Guard Designation) for performance (Myles 1981).

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## Post World War II and Beyond: Global Trends

Following World War II, the number of women in uniform declined precipitously as they returned to their pre-war lives. Most of the women in the Soviet military left, and those who remained found the military environment unwelcoming to women, and their prior service deemed irrelevant (Saywell 1986; Segal 1993; Carreiras 2006). Great Britain was no longer drafting women, albeit the conscription was still in place, and the ATS relied on women to volunteer (Noakes 2006). In Britain, priority was given to rebuilding the home front, and many women were released to occupational positions considered to be feminine (Noakes 2006). A similar trend of leaving the military occurred in the United States as women returned to their civilian lives when the war had ended. Although some women opted to remain in uniform after the war, most left to resume their pre-war lives.

At the end of World War II, it became evident to the United States and Britain that the Soviet Union may pose a threat to Western democracy. All three nations worked on developing nuclear weapons and the Cold War had begun. Both Great Britain and the United States recognized the potential need for women in any future wars and enacted legislation to secure a permanent place for women in the armed services. On 20 November 1946, the British Parliament confirmed that women's auxiliary corps would be retained. The Auxiliary Territorial Services (ATS) and Women's Auxiliary Air Force (WAAF) would become members of the armed services and the Women's Royal Naval Service (WRNS) would remain as a civilian service (Noakes 2006). Two years later, in 1948, the United States gave permanent military status to women through the Women's Armed Services Integration Act of 1948 (PL-625). For the next two decades, the representation of women in the American armed services was restricted to 2%. In 1967, Public Law 90-130 called for the removal of the 2% restriction. Still, US women were disinclined to join the military and their representation in the military remained low.

There were more opportunities for women to serve in an All-Volunteer Force (AVF). Great Britain abolished conscription in 1960, more than a decade before the United States did. In both countries, women were encouraged to enter the AVF to



help meet personnel goals. In the United States, the monetary and other work benefits of military service became an attractive career option to many racial minorities and women who found limited work options in civilian society. Women made up 3% of the active duty forces in 1974. Five years later, the number of women in the US military had increased threefold; and the number of African American women had increased fivefold (Dorn 1989; Moore 1991, 1996).

Race has always been a salient issue in American society and was reflected in trends of representation and experiences of women in the US military throughout history. Overrepresentation of African American women among service women, particularly in the Army, raised interest among military scholars. Some scholars raised the concern that the overrepresentation of Blacks in the military would result in them bearing an unfair burden of defense. The scholars argued that the military should be reflective of the broader society (Dorn 1989). The services also began to exam the interaction effects of race and gender factors on the attitudes of military personnel. Some studies found that African American servicewomen were more pessimistic about the military's equal opportunity climate than white service women, (Moore and Webb 2000). In addition, African American female officers were more pessimistic than African American enlisted women (Dansby 2001; Rosenfeld, et al. 1992). Although African women were less satisfied with the equal opportunity climate than white women, they served longer terms and did not separate from service before their terms had expired as often as members of other racial/ethnic groups on active duty (Binkin et al. 1982, 52-53; Moore 1991, 2002). White women had a lower propensity of joining the military and were less likely than African American women to complete their term of service (Binkin et al. 1982, 52-53; Moore 1991; Moore and Webb 2000). Among the challenges faced by the services was to create initiatives to attract more white women and to more effectively meet the equal opportunity needs, such as inclusivity, of African American women (Moore and Webb 1998, 2000).

In the last four decades, changes in military laws and policies, largely influenced by a climate of equal employment opportunities for women in the broader society, have allowed for women to fill a wider array of military occupations. The trend has been movement toward gender inclusion in the military in the United States as well as other countries. In 1976, US Public-Law 94-106 opened the three major service academies to women. Two years later, Congress passed legislation abolishing the Women's Army Corps as a separate unit integrating women into the regular army.

Unlike previous years, women in the US military started the process of achieving higher ranks in the 1980s. Laws requiring women officers to be appointed, promoted, or separated from service differently from men were abolished in 1980 through the Defense Officer Manpower Personnel Management Act (DOPMA). As a result of DOPMA, US servicewomen could be promoted to grades O5 and above, and civilian husbands of female Nurse Corps officers were authorized dependent benefits (Moore 2017; Rostker et al. 1993). Since the 1990s, there is a greater variety of military occupations opened to US servicewomen. Congress lifted the ban on women flying combat aircraft and serving on combat ships in 1991. In the same year, more than 40,000 women soldiers were deployed to the Persian Gulf

region during Operations Desert Shield and Storm; 15 were killed and two were taken prisoner of war (Lanning 2008:7). US women also participated in military operations in Somalia between 1992 and 1994, deployed for peacekeeping duties in Haiti in 1995, and participated in combat operations in Kosovo in 1999 (Lanning 2008).

Following the war, a US Government Accounting Office (GAO) report concluded that women performed well in combat and were an integral part of the operation (GAO 1993). Still, jobs specifically associated with submarines (Submarine Sonar Technicians, gun or missile crew-members) remained closed. Armor, Infantry, Special Forces, Cannon Field Artillery, and Multiple Launch Rocket Artillery occupations would not open to US servicewomen until 2010.

Although women in various countries throughout history have shown that they are capable to performing in combat, the notion of opening direct combat jobs to women in the United States even in the twenty-first century remained a contentious issue. Scholars, military officials, and news pundits all weighed in on the debate. Opponents emphasized biological differences between men and women, arguing that women are physically weaker than men, are at risk of becoming pregnant, and have an overall negative effect on the fighting capabilities of the American armed forces (see, e.g., Mitchell 1989, 1998). They raised the issue of military effectiveness, arguing that women lacked the strength and stamina to perform effectively in combat. It was also argued that the presence of women in combat units would undermine morale and cohesion (Mitchell 1989, 1998; van Creveld 2000; Kennedy-Pipe 2000). Other opponents maintained that whether or not women are capable of performing as warriors is not withstanding, it is more important for women to bear and raise children than to go off to war (Bruen 1991).

Advocates for lifting the ban on women serving in combat maintained that women should be granted the same opportunities as men to fulfill their citizenship duties (Segal 1982; Stiehm 1998, 1981). Another concern raised by advocates early on was that exclusionary policy hampers the career opportunities for women. Active duty military personnel are not likely to be promoted to the highest military ranks without combat experience (Becraft 1992; Burke 1996; Devilbiss 1985; Holm 1991). Advocates for women serving in combat assert that women's capabilities to perform effectively in war are equal to and sometimes surpass those of men (Segal 1982; Roush 1991; Holm 1991; Peach 1996). Others made the case that the combat exclusion law cannot protect military women from danger during wartime, but rather limits their chances for career advancement (Segal 1982; Becraft 1992).

US military women were divided over the issue of whether or not they should serve in combat. Findings from surveys of Army women from 1993 to 1994 revealed that enlisted women, and women of color, were more likely to oppose assigning women to combat (Miller 2001). Female officers were found to have greater advantages for serving in combat, than enlisted women, as they were more likely to plan a career in the military, less likely to have children, and more likely to perceive their command opportunities to be limited without combat experience (Miller 2001). Most of the Army women surveyed were in favor of women being

able to volunteer for combat if and only if they were able to meet physical requirements (Miller 2001).

The example of the Israeli Defense Force (IDF) was often referenced during these debates as a country in which women were both drafted and served in combat since its inception in 1948. Although women in the IDF were assigned to combat units, they did not deploy for combat, but were evacuated when the unit went to war (Yuval-Davis 1981; Izraeli 1997). An exception was in 1948, during the Arab-Israeli War, when Israeli women took active part in land battles. Early studies showed that, as a rule, the majority of Israeli female soldiers served in secretarial and clerical jobs as did servicewomen in other countries (Gal 1986; Cohen 1997). Although Israeli women had been conscripted, there were many categories exempting them from service, to include marriage, having children, and religion. Women were also able to receive deferments to pursue a college education, so long as they completed military service upon graduation (Cohen 1997; Izraeli 1997). The Israeli Defense Force did not take all eligible 18-year-old women, but rather selected the number of women it needed to meet personnel quotas each year (Gal 1986; Yuval-Davis 1981; Klein 2002). Therefore, the entrance score requirements for women were higher than that for men (Gal 1986).

Israel continues to conscript men and women into the IDF; and men and women train together in today's Israeli military. Still, studies reveal that even today, the majority of women serving in the IDF are assigned to feminine roles; and that their service is not valued as highly as that of men (Karazi-Presler et al. 2018; Rosman-Stollman 2018). Although Israeli women comprise nearly 34% of the IDF, and 90% of the military occupations are open to women, only 4.6% of all women serve as combat soldiers (Karazi-Presler et al. 2018). Rosman-Stollman (2018) reports that Israeli servicewomen serve primarily in occupations in the Education Corps or in human resources. Unlike male-dominated military occupations, these positions, so Rosman-Stollman argues, do not generally yield tangible rewards in civilian society after servicewomen are discharged. Noteworthy is that Israeli female officers are overrepresented among junior officers; representing 56% (Karazi-Presler et al. 2018). However, female officers in the IDF generally do not advance beyond the rank of major; representing only 14% of the officers in the rank of colonel and above (Karazi-Presler et al. 2018).

Contemporary changes in the structure of the IDF have given female junior officers opportunities to be promoted and serve in command positions in a variety of roles (Karazi-Presler et al. 2018). According to Karazi-Presler et al. (2018), junior officer women experience power and authority in their military positions. Their study is based on indepth retrospective interviews with 25 female officers in the Israeli military. Given the gendered structure of the military, these junior officers often express ambivalence about the power they have as officers. On the one hand, the women who had served as junior officers felt ashamed of wielding their power. On the other hand, many found the power they experienced in the military empowered and strengthened them in other aspects of their lives long after they had left the military (Karazi-Presler et al. 2018). There is also evidence that women serving in combat units in the IDF feel more empowered and have a greater sense of

self-efficacy even when they had experienced life-threatening situations (Shahrabani and Garyn-tal 2019). Women who served in mixed-gender combat units stated that they had to work harder than the men in order to prove themselves, but through the process of proving themselves, they believed more in their own abilities (Shahrabani and Garyn-tal 2019).

During the first few years of the twenty-first century, US servicewomen continued to deploy to warzones (Yemen, Afghanistan, and Iraq) and served in combat, albeit unofficially. In 2004, Army women, known as Lioness, were assigned to Marine Corps ground combat units to assist on raids where women and children were present (Moore 2017). Later, the Female Engagement Team (FET) was developed and attached to military combat units to interact with local women in the rural regions of Afghanistan. By 2010, Fleet Ballistic Missile submarines (SSBN) and guided-missile attack submarines were open to US servicewomen (Moore 2017). Since 2013, all military occupations and units are officially open to women in the United States. US women have now completed combat leadership course in the US Army Ranger School (Moore 2017) and are officially attached to Special Forces in all-female Combat Support Teams (Moore 2017).

The trend of expanding military roles to include women is occurring in most Western countries, as well as Africa, Asia, and Australia (Moore 2017; Carreiras 2006). This trend has been facilitated by the United Nations Security Council Resolution 1325 which has established frameworks to include women in decision making processes about military operations. A study on women in North Atlantic Treaty Organization (NATO) forces reveals that all NATO countries recruit women on a volunteer basis and the percentages of military women in these countries are low, less than 15% (Carreiras 2006). The NATO countries with the largest percentages of women in the year 2000 were the United States (14%), Canada (11.4%), France (8.5%), the United Kingdom (8.1%), and the Netherlands (8.0%) (Carreiras 2006:99). The NATO countries with the lowest percentages of women included Italy (0%), Poland (0.1%), Turkey (0.1%), Germany (1.4%), and Norway (3.2%). In this study, most women serve in the air force and fewest served in the army; and most serve in administrative support and medical positions (Carreiras 2006). A small fraction of women, 7%, served in combat arms positions (Carreiras 2006).

Sweden's draft system constitutes an interesting case as both men and women 19 years of age are required to enlist in the military. This gender-neutral conscription system, which was implemented in 2018, has been decades in the making. Such a policy reflects Sweden's effort to insure that both women and men fulfill their obligation as citizens. Persson and Sundevall (2019) discuss the heated public debate that occurred over implementing a gender-neutral conscription in Sweden beginning with the youth league of the People's Party in 1965. A gender-neutral form of conscription was adopted as early as 2010, but the conservative-liberal government of Sweden proposed a Bill (which was adopted by parliamentary majority) to deactivate it (Persson and Sundevall 2019). In 2017, due largely to perceived threats to national security, a coalition of Social Democrats and the Green Party reactivated conscription. Today, Swedish women serve in all military branches and positions including combat; but their percentages are low, and women are generally subjected

to inadequate equipment. According to Persson and Sundevall (2019), men comprise 85% of the selected conscripts and 93% of the professional military officers.

In the Ukrainian military, by contrast, a large number of occupations are closed to women. According to Martsenyuk and Grytsenko (2017), approximately 10% of the Ukrainian military are women; 14,500 female soldiers and 30,500 female contract employees of the armed services. Almost 2,000 Ukrainian women are officers, 35 of whom hold managerial positions in the Ministry of Defence. Of the 14,000 people in the National Guard, 21 are women holding positions of doctors and nurses (Martsenyuk and Grytsenko 2017). Many Ukrainian women serve informally. Unless a woman is formally classified as a combatant in the Ukrainian military, she will not receive military benefits when she departs service. Since 2016, Ukraine has implemented a National Action Plan to increase the number of women in the military and to introduce gender sensitivity training for military personnel in an effort to address gender-based violence. As of 2016, 63 staff positions, including some combat positions (i.e., bomb aimer, gunner, and scout, and sniper) are opened to women.

Australia also acknowledges the need to increase the representation of women in its defense force (ADF) particularly among the senior officers. Lee Hayward (2018) reports that women make up 12% of the Australian Army and are vastly underrepresented in the senior ranks. Although promotion to the senior ranks is based on a merit system, Hayward illustrates that the meritocracy reflects the values and biases of the decision-makers who are all male. Consequently the more senior the positions, the more homogenous they are. Hayward (2018) recommends that the Australian Army recognize the bias that is inherent the merit system and introduce new measures to achieve gender equality goals in the senior officer ranks.

The Jordanian armed forces (JAF) is relatively small, consisting of 100,000 active duty and 65,000 reservists (Maffey and Smith 2020). Women comprise only 4% (or 3500) of all personnel in the JAF; most of whom serve in medical services (Maffey and Smith 2020). The role of women in the JAF is determined largely by gender norms within the family structure. Maffey and Smith (2020) discuss how these norms can range from traditional and restrictive to progressive and equitable. With the exception of war (i.e., the Lebanese war 1975–1991 and the Algerian War for Independence 1954–1962), women in the JAF are relegated to positions in education, health services, and business (Maffey and Smith 2020). Many women in the JAF expressed satisfaction with their military assignments and the opportunity to advance in rank vis-à-vis Jordanian women in the civilian labor force. However, the representation of women in the JAF lags behind other countries like Israel, the United States, and Norway. Maffey and Smith (2020) argue that the confluence of cultural, societal, political, and environmental factors impedes the career advancement of women in the JAF. The most prestigious positions are not offered to women as these occupations would require women to be away from their families for long periods of time (Maffey and Smith 2020). Jordan has recently developed an action plan for increasing the representation of women in the military.

According to an exploratory study of militaries in East Asia, China has a long history of ancient women warriors, including General Hao Fu who commanded

more than 13,000 soldiers from 1250–1192 BC (Obradovic 2015). According to Lan Obradovic (2015), these ancient female warriors are still revered in China today. Women were first officially integrated in the People's Liberation Army (PLA) in 1967 and were recruited from the families of workers, peasants, soldiers, staff, and small merchants (Obradovic 2015). Between 1966 and 1976, during China's proletarian revolution, serving in the military was regarded as being a privilege for women. Lana Obradovic (2015) claims that Chinese women in uniform were glorified and were not discriminated against because of their gender. Today, China provides female military recruits with economic incentives (Obradovic 2015). Although there is not widely published information on women in the Chinese military today, Obradovic (2015) reports that they are assigned to various occupations to include signal, telegraph, submarines, space missions, and fighter jet pilots.

The Women's Army Corps in South Korea was officially established during the Korean War (Obradovic 2015). During that time, women served mainly in the medical field as surgeons, dentists, and nurses (Obradovic 2015). Since the 1990s, South Korean women have been fully integrated into all branches of military service; however their numbers remain relatively low compared to other democratic societies (Obradovic 2015). A reported 10,000 South Korean women serve among a total of 630,000 active duty personnel. The South Korean military is described as having a problem with discrimination against women, sexual harassment, and sexual violence. Violence against women in the South Korean military has been assessed as being a reflection of "means of reinforcing Confucian culture of gender hierarchy and hegemonic masculinity within the military institution (Obradovic 2015, p.10)."

Women comprise approximately 24% of the South African National Defense Force (SANDF). They receive the same training as men and have been serving in combat roles for two decades (Heinecken 2017). Still, as illustrated in a recent study, women are not fully accepted in the SANDF largely because of cultural norms, values, and practices (Heinecken 2017). Data for this study were collected during a Department of Defense (DoD) gender conference in Pretoria, South Africa in 2012. Most respondents (52%) felt that combat service should be optional for women; while 39% felt that women should be compelled to serve as are men, and 10% believed that women should be barred from combat altogether. Still, the SANDF employs a gender-neutral policy in its effort to manage gender integration. Although norms are changing and the presence of women in the SANDF in various positions is beginning to be accepted, the service of women is not valued as highly as that of men. Lindy Heinecken argues that a gender-neutral perspective does not result in gender equality. This is because there are real gender differences and to expect women to perform the same as men is simply unfair.

The United States continues to make strides toward integrating women into the armed services. Recent data from the US Department of Defense reveals that in FY 2017 female representation in the active component (AC) reached its highest level in the history of the US military. US military women now comprise 16% of the enlisted forces and 18% of the commissioned officers (DoD 2018b:6). In FY 2017, female representation among AC with no prior service (NPS) was highest in the Air Force (19.5%), followed by the Navy (19.4%), the Army (14.3%), and the Marine Corps



(8.5%) (DoD 2018b:24). The percentage of racial minority servicewomen is almost doubled that of racial minority service men. As in previous years, overrepresentation of racial minority women (specifically African American women) in the enlisted force is related to their higher representation in AC NPS accessions as well as their higher retention rates (DoD 2018b). Racial minority women represented 41.4% of female Army accessions in FY2017, but racial minority men represented 26% of male Army accessions (DoD 2018b:28). Hispanic women are over represented in the Marine Corps; however Hispanics are underrepresented in the enlisted active component (AC). The racial minority (or non-white category) is comprised mostly of African Americans. Similar to previous years, service women in FY2017 are most likely to work in administrative (25%), medical (14.5%), and supply (14.1%) fields. The top three occupational categories for men, on the other hand, are electrical (21.9%), infantry/bun crews/seaman (18%), and supply (11.1%) (DoD 2018b:26).

Women's representation among the active-component officer corps has been steadily increasing in all of the services with the exception of the Marine Corps since the onset of the AVF. The representation of female in the officer corps of the Marine Corps has been relatively low but has maintained a steady level. In FY2017, the Air Force had the highest representation of women in the active component officer corps (21%), followed by the Navy and Army (17.8%), and then the Marine Corps at 7.7%. (DoD 2018b:32).

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## **Current Issues and Methods of Measuring Them**

### **Low Propensity to Enlist**

There are a several issues which create obstacles to the full integration of women in the military globally. For the most part the problem of female integration is rooted in cultural norms. Scholarly studies have and continue to address these issues, which will require further investigation well into the future. Among many concerns is the low propensity of women to join the military. As mentioned above, the representation of women in the Swedish, Jordanian, Ukrainian, and South Korean military is low. The representation of women in the US armed services has increased but is also low. Women now comprise approximately 16% of the US active armed services. By contrast, women make up between 46% and 51% of the civilian labor force. This is controlling for women of comparable age and education makeup (college degree for officers) (DoD 2018b). Although 16% is a noticeable increase in the representation of active duty women in recent years, it is much lower than the percentages of women in civilian society. Surely, women are grossly under represented in US armed service. The large representation of racial minorities in the enlisted ranks (particularly in the Army) most likely reflects the lack of adequate job opportunities for African Americans in the civilian labor market. This raises the issue of who bears the burden of national defense.

As mentioned above, gender disparity in military representation is not unique to the United States. Low representation of women in the services can be found in

militaries globally (Segal 1993; Carreiras 2006; Martsenyuk and Grytsenko 2017; Persson and Sundevall 2019; Maffey and Smith 2020). Although women are underrepresented in the American armed services, the United States has the largest percentage of women in its military than other NATO countries (Carreiras 2006:99). This just further illustrates that low representation of women in the military is a global phenomenon.

## **Sex Segregation in Military Occupations**

Another key issue is sex segregation in military occupations. Although all military positions in the United States are open to women, they are still concentrated in administrative, medical, and other support jobs (such as supply, electrical, electronics, and communications). This is in contrast to military men who are more likely to be in infantry, tactical operations, and equipment repair. Women are underrepresented in military career enhancing positions like infantry. This sex segregation in military occupations is also found in militaries in other countries (Carreiras 2006:105). Studies have shown sex segregation in military occupations to be a factor in women not advancing through the ranks as quickly as do men, which can ultimately obstruct their career progression (Segal 1982; Carreiras 2006). This issue is also of concern in militaries globally (Martsenyuk and Grytsenko 2017; Maffey and Smith 2020).

Contributing to the lack of representation of women in male-dominated service jobs is the lack of support they receive on the part of leadership. It is true the greater presence of women serving in the military challenges the notion that men are more capable than women. However military women are still expected to work in roles defined as appropriate for females. Recent studies of military academy students found that these budding military leaders are opposed to women serving in non-traditional roles (Laurence et al. 2016; Matthews et al. 2009). Examining survey data from service academy cadets, Reserve Officer Training Corps (ROTC) cadets, and college students, investigators found that service academy cadets who identified as male and Republican had the lowest approval scores, or the least support, for women serving in military roles (Laurence et al. 2017, 2016). Some scholars recommend aggressive training programs for future military leaders (Laurence et al. 2017, 2016).

## **Sexual Harassment/Assault**

Over the last 30 years, sexual harassment/assault has been a primary issue in all of the services in the US armed forces and other countries as well. Although sexual harassment/assault is not unique to the military, it became associated with military organizations in the 1990s as a result of the Navy *tailhook* incident (1991), rape charges against male non-commissioned and commissioned officers at Maryland's Aberdeen Proving Ground (1997), and sexual harassment charges against the Sergeant Major of the Army (1998). Since then there have been a number of sexual harassment/assault charges concerning military personnel globally. In May 2013, the



US Department of Defense developed a strategic plan (amended on January 2015) to unify the services in an effort to eliminate sexual assault. The current Sexual Assault Prevention and Response office (SAPRO) provides oversight, investigates claims, and publishes detailed annual reports on sexual assault involving members of the armed services. Each report presents statistical data and analyses and can be obtained through the following website: <https://sapr.mil/reports>.

Sexual misconduct in the military continues to be examined in scholarly literature as well. An example of a quantitative study recently published discusses the importance of organizational justice climate in alleviating sexual harassment in the workplace. Using data from two Department of Defense's surveys, the 2006 Workplace and Gender Relations Survey (WGRS) and the Defense Equal Opportunity Climate Surveys (DEOCS), Rubino et al. examined the role of organizational justice climate as a predictor of sexual harassment and assessed its potential as a moderator of already established relationships between antecedents. Among the findings of this study is that organizations that effectively manage "justice climate," also deter sexual harassment. The investigators found that psychological and collective justice climate related negatively to sexual harassment and moderated the effects of sex similarity and sexual harassment climate on sexual harassment (Rubino et al. 2018).

Other inquiries about sexual harassment/assault are best examined through qualitative analyses. In today's society, sexual misconduct may take various forms other than direct contact with victims. A study of implications associated with containing the 2011 Australian Defense Force Academy (ADFA) Skype sex scandal is a good example. According to Habiba (2017), a female cadet of the ADFA went to the media and claimed that, unbeknownst to her, she had been Skyped via web cam having sexual intercourse with another cadet. The female cadet decided to go public with the event after learning that the accuser would only face a minor charge. As a result of the cadet going public, the ADFA Skype scandal resulted in the biggest scandal in Australian military history leading to investigations that unveiled hundreds of other cases of sexual abuse in the Australian Defense Force which had been concealed (Habiba 2017). Using qualitative methods, Boltanski's processes theory, and Bourdieu's field theory, Habiba analyzed how the handling of military sexual misconduct cases resulted in leakage of this information into the public domain. This led to heavy scrutiny of the protagonists as well as the processes within military organizations (Habiba 2017). By becoming public, the cost of the ADFA skype sex scandal increased for all stakeholders. The author concluded that to avoid negative consequences of scandals, organizations need to address conflicts (sexual or otherwise) in a timely fashion and explore all factors that contribute to it early on.

## Escalating Suicide Rates

Another central concern is the accelerating suicide rate among military personnel in the United States which has surfaced over the last few years. Recently the RAND Corporation published data showing that the suicide rate among women in the military over the last 6 years has increased twice the pace of male service members.

When compared to civilian women, military service women were two to five times more likely to take their own lives. The data were published in a RAND multimedia Veterans in American podcast on November 11, 2018. Military sexual trauma was found to be the main factor as well as combat stress disorder and other factors contributing to suicide among service women (see: Gorn 2018). DoD (2018b) reported that service members who died by suicide were younger than 30 years of age, usually enlisted and male. Other studies show that while men are more likely to die of suicide, women are more likely to attempt to take their lives (DoD 2019). Suicide rates are highest in the Army (24.3 suicides per 100,000 populations), followed by the Marine Corps (23.4), Navy (20.1), and lowest in the Air Force (19.3) (DoD 2019:v).

In 2018, the Department of Defense reported an increase in suicide rates among the active duty service members and higher than expected rates in the National Guard compared to the US population (DoD 2018a). Based on these results, the Department of Defense began implementing a multi-faceted public health approach to suicide prevention. Among DoD strategies for suicide prevention is an initiative to help enlisted Service members develop foundational skills to deal with life stressors early in their military career. DoD also supports military families by implementing strategies for them to increase awareness of risk factors for suicide (DoD 2018a). Each of the services (US Air Force, Army, Marine Corps, and Navy) are required to collect data and submit it to DoD for publication in its suicide event report. Every death by suicide and each identified suicide attempt must be reported. Much of the data are statistical and quantitative analyses are used in the reports which provide suicide rates, describing various factors associated with instances of suicide for each calendar year (DoD 2018a; DoD 2019).

Scholarly publications on suicide rates among military members focus on a variety of topics to include the impact of confidentiality on disclosure of suicidal thoughts (Anestis and Green 2015), combat exposure, and the risk of suicide thought (Bryan et al. 2015). Using a quantitative study, Reimann and Mazuchowski (2018) compare military suicide rates with civilian suicide rates, adjusting for age and sex differences from 2005 to 2014. According to their findings, suicide rates among US active duty service members increased between 2005 and 2009. They also found a significant association between higher suicide incidence for 17–29-year-old females in 2010, 2012, and 2014. Although these and other studies have been published on suicide rates among military personnel, so many more are needed to in an effort to better understand the causes and to best implement strategies of prevention.

## **A Masculine Culture**

Arguably the main issue obstructing full integration of women in the armed services is the persistent culture of masculinity. This factor is articulated in studies of women in the military globally. Other issues like, low propensity to serve, sexual harassment/assault, and gender segregation in occupations may all be related to a culture that excludes women from full participation. Military men have voiced resentment

toward the double standard between men and women in uniform. An early RAND study found that male soldiers were less concerned about gender differences and more concerned about structural inequality as it pertained to gender. For the service men who were surveyed, gender issues were not cited as affecting morale as often as were leadership issues. When male respondents raised gender as being an issue, they usually objected to a double standard in policies for men and women. "Men . . . tended to assert that women demanded equal rights and recognition within the company but they were not equal in their performance or contribution to the unit. . . . Men claimed that female standards were too easy and that women were not being forced to meet even the lower standards (see: Harrell and Miller 1997:80)." Indeed, female service members were held to different physical fitness standards than men; required to do modified pull-ups, fewer push-ups; and allowed more time to meet running requirements. A *Washington Times* article published in 2002 revealed that men at military service academies resented that women were held to a lower standard (Washington Times 2002: 20).

There is a debate in social science literature on whether or not women should meet the same standards as men in order to qualify as good military personnel (Moore 2017). Some argue that in order for servicewomen to be successful, they must perform the same roles, and pass the same tests as male service members (King 2015). For King (2015), military women must be *honorary men* if they are to be respected in their military jobs. Others argue that women are not the same physiologically as men and do not aspire to be biologically equal to men (Brownson 2014, 2016). Brownson rejects King's assessment, arguing instead that service women aspire to a *kinship-reciprocity ideal of equivalency*, in which they are valued for the contributions they bring to the exchange (Brownson 2016).

Indeed, research confirms that men and women are physiologically different. One such study, using data from DoD's Armed Forces Health Surveillance Center, examined gender by race differences in self-reported post-traumatic stress disorder. Using a logistic regression analysis, the investigators found that more combat exposure were associated with a higher risk of PTSD (post-traumatic stress disorder) for service women compared to service men (Mustillo and Kysar-Moon 2017). Another research question raised by these investigator was whether or not Black female service members are at greater risk of experiencing PTSD following traumatic combat exposure than White female service members. They found no difference between black and white service women. The results of this study show that Black service women do not have a greater risk for PTSD than do White service women. However, service women are more vulnerable to traumatic stress exposure than are men (Mustillo and Kysar-Moon 2017). The issue of physiological differences between males and females merits continued discussion if women are to be fully integrated into the military.

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## Some Additional Concerns

The topics mentioned above are only a few of the gender issues that will follow us well into the twenty-first century. Some issues pertaining to gender integration not discussed in this chapter, but nonetheless merit further investigation, include issues associated with pregnancy, obstetrics, and childcare. Strategic plans to strengthen family care plans for single parents making them more deployable warrants serious discussion (Booth et al. 2007). Ways to provide servicewomen with properly designed and fitted combat equipment also warrant careful exploration.

The goal of gender inclusivity is complicated, and there are a number of normative and practical issues yet to be resolved. Issues pertaining to women in the military are the focus of several committees in the nation's Capital. One such committee is the Defense Advisory Council on Women in the Services (DACOWITS), which reports to the Secretary of Defense on matters relating to women in the US military. The Committee consists of qualified professional women in the US armed forces. They make recommendations on policies relating to recruitment and retention, employment, integration, well-being, and treatment. Each year DACOWITS publishes minutes of their meetings as well as a report of its research findings and recommendations. These data can be obtained through the following website: <https://dacowits.defense.gov/Reports-Meetings/>.

Among the issues addressed in their FY 2018 report are (i) variance in women's recruitment and retention by race/ethnicity, conscious and unconscious gender bias in the services, underrepresentation of female chaplains, revised physical fitness tests accounting for physiological gender differences, gender integration of women in ships, pregnancy and parenthood policies, and domestic violence affecting servicewomen (see: DACOWITS 2018).

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## Summary and Concluding Remarks

The issue of whether or not women should serve in combat is less about a woman's ability to do so and more about cultural norms and gender roles. For sure, women have filled the role of combatants throughout history. During times of conflict, nations have drafted and recruited the services of women. During times of peace, the service of women has fallen into obscurity. A number of structural changes that have occurred over the last four decades in an effort to remove institutional barriers to the integration of women in the military globally have been reviewed. In the United States, opportunities for women to be assigned to occupations that had been previously closed to them were ushered in with the All-Volunteer Force. Doors to aviation duty in noncombat aircraft, as well as noncombatant ships, opened to women. Service academies began to enroll women. The 1980s witnessed even more changes in Congressional laws and military policies moving closer to integrating women in the services. Not only are there more occupational positions available to US military women, but more family support services such as medical, and childcare are provided for service members. Quality of life concerns, such as living

facilities, have been addressed by each of the services in an effort to attract good women as well as good men. Although physical constraints which have categorically excluded women from the armed services have been removed, women are still vastly underrepresented.

A question is why should societal members concern themselves with the representation of women in the military? What is really at issue? To answer that question, one must consider the fact that throughout history, militaries of Western democracies (and elsewhere) have been male dominated institutions based on a culture of masculinity (Enloe 1981). Traditionally, service in the military was both a right and an obligation of citizens (Marshall 1950; Janowitz 1975); and full citizenship with all of the accompanying rights was reserved exclusively for men. If women are to be first class citizens, then it follows that they must actively participate in the national defense and peacekeeping efforts.

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## Cross-References

► [Dynamic Intersection on Military and Society](#)

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# Operations in Irregular Warfare

Martijn Kitzen

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## Abstract

Irregular warfare differs tremendously from the regular, conventional warfare for which Western armed forces traditionally have been optimized. This chapter explores this contrasting form of warfare and its underlying body of knowledge which characterizes irregular conflicts as violent struggles involving nonstate actors and states that seek to establish power, control, and legitimacy over relevant populations. Due to military asymmetry and the political nature of the struggle, the use of force mostly takes unconventional or unorthodox forms and is typically combined with other, non-kinetic, activities. As such, irregular warfare favors an indirect approach that does not focus on military defeat, but on winning the population(s) at stake and eroding the opponent's will. This forces conventionally focused armed forces to adapt to the specifics of an irregular conflict. In order to discuss the way western militaries have operationalized the irregular warfare mission, this analysis first describes terrorism and insurgency, the

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M. Kitzen (✉)  
Netherlands Defence Academy, Breda, The Netherlands  
e-mail: [mwm.kitzen@mindef.nl](mailto:mwm.kitzen@mindef.nl)

dominant forms adopted by irregular opponents. Consequently, the discussion focuses on the five main types of operations: counterterrorism, counterinsurgency, stability operations, security force assistance, and unconventional warfare. To conclude, this chapter not only looks at the way Western armed forces conduct operations in irregular warfare, but also reflects on the topic as a field of knowledge. Ultimately, it is argued that whereas regular and irregular warfare are often considered dichotomous, developments in current warfare have revealed the necessity to consider both forms complementary. Modern militaries, therefore, should structurally embed irregular warfare capabilities in addition to their regular capabilities.

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**Keywords**

Irregular warfare · (Counter)terrorism · (Counter)insurgency · Stability operations · Security force assistance · Unconventional warfare

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**Acronyms**

BWT	By-With-Through
COIN	Counterinsurgency
CT	Counterterrorism
F3EA	Find, Fix, Finish, Exploit, and Analyze
GWOT	Global War on Terrorism
IED	Improvised Explosive Device
KLE	Key Leader Engagement
PRT	Provincial Reconstruction Team
SFA	Security Force Assistance
SO	Stability Operations
UAV	Unmanned Aerial Vehicle
UW	Unconventional Warfare

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**Introduction**

Western military thought has traditionally been dominated by the idea that wars are fought between militaries of opposing states. This concept of “regular” warfare dictates that armed forces should be optimized for defeating similarly organized opponents on the battle field. Consequently, Western militaries share a deeply rooted preference for conventional operations. Yet, this one-sided focus might be misplaced as history is rife with examples that do not abide to the conventions of regular warfare. Indeed, elusive enemies who seek to avoid battle and employ hit-and-run tactics or even use indiscriminate force against civilians have been there since long before the emergence of conventional armies. Moreover, these armies have a poor track record when it comes to fighting such “irregulars.” The experiences in Iraq and Afghanistan, in this regard, are all but exceptional. Yet, the ability to fight irregular opponents has gained in importance recently; the twenty-first-century security

environment is characterized by an abundance of violent nonstate actors who do not adhere to the principles of regular warfare. This equally applies to the rise of hybrid warfare in which state and nonstate actors alike preferably operate below the threshold of overt war and revert to irregular activities instead. Consequently, the capability to take on missions outside the conventional comfort zone should be a quintessential part of any modern military's tool box. But how does this materialize? This chapter will discuss different types of operations for either dealing with irregular opponents or deploying activities in the irregular realm. For this purpose, the analysis explores various scholarly views toward the subject, and as such it provides an oversight of the underlying body of knowledge. Ultimately, this not only allows for drawing conclusions on the way modern armed forces conduct operations in irregular warfare, but also for reflecting upon these operations as a field of knowledge. First, however, it needs to be clarified what exactly irregular warfare encompasses and how this can be operationalized.

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## **Irregular Warfare**

Obviously, the term irregular is the antithesis of regular. When applied to warfare, therefore, it can be used to describe any conflict that does not involve similarly organized opposing armies that seek to defeat each other on the battlefield in order to secure the interests of their respective states. Yet, such a definition is hardly satisfactory as it merely points out what irregular warfare is not. What, then, is irregular warfare? A starting point for understanding war as a phenomenon is to take a closer look at the purpose for which force is used. Typically, in irregular conflicts armed groups seek to confront states in order to change an existing political order – either local, regional, or global. This can be achieved by seizing a territory as for instance the Islamic State's establishment of the Caliphate, or by wresting control of a political system which allows for the redistribution of power and securing the authority over (parts of) a society. Examples of the latter include the violent struggles that are often witnessed in weak or failed states like Afghanistan or Somalia. Thus, the utility of force in irregular warfare is to secure power and control, and therefore this form of warfare is of an inherently political nature.

The most eye-catching feature of irregular warfare is provided by the way in which armed groups seek to obtain their political purpose. This is a logical consequence of the character of the involved actors themselves. Contrary to regular armies the means of nonstate actors and groups fighting as state proxies are relatively limited. The fight between a state's army and an irregular opponent, therefore, is the archetype of military asymmetry (It should be noted, however, that symmetric fights might also occur in irregular conflicts. Think, for instance, of the fighting between various violent extremist factions in the Syrian civil war. Additionally, sophisticated irregular actors might adopt symmetric warfare in order to defeat a regular army in conventional battle – as prescribed by Mao –, or to switch between different forms of warfare. Recent examples of the latter include Hezbollah and Islamic State.). This forces such enemies to carefully manage their scarce resources

and seek creative ways to effectively deploy them. Schmitt (1963), in this regard, has pointed out that the degree of irregularity of an actor is directly linked to the strength of the regular army it faces. Typically, the resulting unbalance leads to the practice of hiding among relevant populations for survivability and operability. Such a popular sanctuary forms a perfect basis in which fighters can clandestinely hide and wait for an opportunity to attack much stronger conventional forces. Additionally, in most cases involving Western countries, conventional armed forces' ability to escalate will be limited out of fear for civil casualties. Even more important, given the purpose of the struggle, focusing on the population itself offers an excellent opportunity to augment an armed group's power and control, while simultaneously eroding the government's authority, legitimacy, and will. Moreover, augmented influence over the people also allows for the mobilization of new recruits and other resources from within the target society itself. As such, this spin off can be used to mitigate the unbalance in resources. Irregular conflicts, consequently, often take the shape of a competition for control in which violent armed groups and states vie to secure the collaboration of the population(s) at stake (Kalyvas 2006; Kilcullen 2013). The asymmetric character of this type of warfare, thus, favors an indirect approach in which the relevant populations are the essential high ground to be taken. Thereby, irregular warfare is a form of what Smith (2005) has famously dubbed "war amongst the people" in which "civilians are the targets, the objectives to be won, as much as an opposing force" (War among the people is frequently mistaken as being synonym to irregular war. While Smith's argument emphasizes the irrelevance of traditional regular warfare in the contemporary security environment, he adopts a wider scope in which he envisions the dominant influence of various populations in modern war.).

Any act of violence in irregular warfare is intimately related with both its political nature and the centrality of the population. Even seemingly indiscriminate "barbarian" deeds can fit a political purpose as state and nonstate actors alike might use such violence to coerce people into collaboration or deter defection to and cooperation with enemies. Yet, most actors prefer to achieve this purpose through the use of selective force aimed at key individuals. For regular troops, however, the murky character of the struggle makes it hard to distinguish irregulars from civilians. This is what Kalyvas (2006) has labeled "the identification problem." Government forces, therefore, experience difficulties in targeting (those associated with) their enemy, and risk committing random atrocities (As opposed to the deliberate use of indiscriminate violence which serves the purpose of coercing a selected societal group into compliance. This method has been used extensively by, among others, the Syrian regime in the recent civil war. While some scholars point at the effectiveness of this approach, the resulting condition of control is such that it can only be maintained through continuous repression.). In many cases feelings of fear, frustration, or retaliation have lured soldiers into this trap. This directly affects the legitimacy of a state as people will feel alienated and are driven in the hands of the opponent. Moreover, especially Western intervening states will also suffer from a decline in legitimacy of the intervention itself – both at home and internationally. Legitimacy,

consequently, is a key issue in irregular warfare as it offers a powerful mechanism for justifying both an actor's authority and the use of force.

Generally, both sides in irregular warfare also heavily rely on nonviolent (or non-kinetic) methods that seek to exploit social and psychological mechanisms in order to persuade people to collaborate or to stop supporting the opponent. The global reach of modern communication technology and cyberspace enables both state and nonstate actors to spread powerful narratives aimed at influencing relevant social networks all over the world. Within the conflict itself non-kinetic activities are typically employed for building or enhancing legitimacy. Strengthening the connection with the target population through provision of material support or immaterial goods such as political participation is a well-known catalyst for consolidating control and authority. Yet, it should be explicitly mentioned here that contrary to popular belief "hearts and minds" activities alone do not suffice for winning. Irregular wars are in the first place highly dynamic contests between adversaries who continuously seek to thwart each other's attempts to gain the overhand. This, of course, inevitably involves the use of force.

Due to the asymmetric character of most irregular conflicts the actual fighting between opponents might be limited, yet protracted. Irregular actors are well-known for adopting guerrilla tactics in which they not only hide among the local population, but also make good use of their knowledge of the local terrain. The unconventional, creative use of limited resources allows for the effective application of lethal force against regular opponents. Advances in technology might accelerate this as demonstrated by the huge leaps in insurgent Improvised Explosive Device (IED) capabilities in Iraq and Afghanistan. Thus, armed groups are capable of drawing stronger conventional forces in a protracted battle of attrition. Additionally, such actors might deliberately employ force to provoke a disproportional reaction or to actively undermine the will of an intervening state. Think for instance of the 2004 Madrid bombings that triggered the withdrawal of Spanish forces from Iraq. This demonstrates that, ultimately, it is not the act of force itself, but its political consequences that matter. The very same rationale underlies the reason for adopting a prolonged struggle. While seemingly contradistinctive due to the relatively scarce resources of armed groups, protracted attritional fights hold great potential. Especially when an irregular opponent poses a nonexistential threat, mounting casualties and costs typically start to outweigh a state's interest first and thereby affect its will to continue fighting – especially in case of an intervening power. Moreover, local people will choose the side of the irregulars as they come to realize that a specific group will most probably outstay the foreign forces. Kissinger (1969) accurately described this dynamic of "physical attrition" and "psychological exhaustion," duly pointing out that this boils down to the fact that "the guerrilla wins if he not loses" while "the conventional army loses if it does not win."

To conclude, irregular warfare can be defined as a violent struggle involving nonstate actors (including violent armed groups acting as state proxies) and states with the purpose of establishing power, control, and legitimacy over relevant populations. Due to military asymmetry and the political nature of the struggle, the use of force mostly takes unconventional or unorthodox forms and is typically

combined with other, non-kinetic, activities. As such, irregular warfare favors an indirect approach that does not focus on military defeat, but on winning the population(s) at stake and eroding the opponent's will (Amidst the myriad of definitions dealing with irregular warfare, this definition borrows most heavily from Kiras' (2016) outstanding work and the US Irregular Warfare Joint Operating Concept 2.0 (2010) which both result from extensive study of theory as well as historical and contemporary practice.). The question that matters here is how modern, conventionally focused, Western-style armed forces can effectively adapt to this form of warfare and which kinds of operations should be adopted for that purpose.

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## Operationalizing Irregular Warfare

There is little doubt that fighting irregular opponents provides a challenge of Herculean proportions. While success is hard to achieve, historical experiences have demonstrated that it is not impossible for Western conventional forces to win irregular wars. Yet, this requires adaptation to the form of conflict, the specific enemy, and the local circumstances. While the latter two differ for each unique case, different types of irregular warfare can be distinguished at the macro-level. Kiras (2016), in this regard, has noted that historically terrorism and insurgency are of particular interest for grasping the complexities of modern irregular warfare (Kiras identifies five main categories of irregular warfare: coup d'état, terrorism, revolution, insurgency, and civil war. In addition to historical reasons, he also points at the fact that terrorism and insurgency due to time and geographic scope are most relevant for studying modern irregular warfare.). Understanding how conventional militaries can adapt to the challenges of such conflicts, therefore, first requires an exploration of these two types.

While there is no consensus on a definition of terrorism, most scholars and practitioners agree it includes the threat or actual use of force in order to attain a political goal through fear, coercion, or intimidation. A terrorist act, thus, serves the purpose of attaining a higher political goal – which can also have a religious, economic, or social character – beyond the immediate victims of the deed itself (LaFree 2018). In order to reach such a larger audience, terrorists aim at symbolic or civilian targets which they typically attack by use of illegal force and violence. Although states might revert to terrorism, the focus here lies at nonstate actors like Al Qaeda and Islamic State whose actions have had such great consequences for the deployment of Western conventional forces ever since the start of the Global War on Terrorism (GWOT) in 2001. For such groups, terrorism offers a chance to exert influence in the international arena with relatively few resources. Their networks of small cells allow for mounting protracted terrorist campaigns with global reach. This not only applies to terrorist acts themselves, but even more to the capability to influence wider audiences; especially cyberspace has proven itself a powerful accelerator for conveying the so-called propaganda of the deed. Thus, modern nonstate actors can seek to convince a target population and its political leadership to comply to its demands as the perceived costs of vicious attacks outweigh the

interests at stake. Next to this coercive mechanism, terrorism can also function as a reactive strategy that seeks to provoke an opponent to (over)react in such a way that its interests are damaged. Probably the best example is given by the 9/11 attacks that have lured the USA in actions that not only have been costly in terms of lives and resources, but also played into the hands of Al Qaeda (Kilcullen 2009). Moreover, the GWOT is still ongoing and its results have been questionable at best. Al Qaeda, although seriously reduced, has not been eliminated and has shown remarkable resilience. Furthermore, the emergence of new groups such as Islamic State can at least be partly attributed to conditions created by the very interventions that sought to end terrorism. All in all, it is obvious that terrorism confronts modern militaries with serious challenges.

In the discourse on military operations terrorism and insurgency have often been used interchangeably (Kitzen 2012). Yet, there is a profound difference between both forms of irregular warfare. Insurgency in essence is a hybrid form of warfare that combines subversion, guerrilla, and terrorism in order to establish political control over (parts of) a country or region. To add to the complexity, insurgents indeed might use terrorism as a tactic to coerce people to comply to the group's demands. The difference with terrorist groups lies in the fact that such deeds are used in support of other methods for establishing control. That is exactly the reason why the use of terrorism against civilian targets by insurgents is a rather precarious issue as too much indiscriminate violence might turn people against the insurgency and thus negatively affect the quest for control. Subversion, in this respect, is paramount for achieving the political goal and insurgencies typically first strive to expand their support base. Convincing local people that they are better off by supporting the insurgency is truly an art which might be applied so effective that a country can be out-administered by an insurgent shadow administration (Fall 1965). Moreover, popular support also allows insurgents to hide among the people and recruit new fighters. Both are pivotal for mounting a protracted campaign, and this is exactly why Mao has famously called the population the native element, "the water," on which the insurgents, like "fish," depend to survive and fight (Mao 2000). Parallel to these activities, insurgents employ guerrilla tactics in order to compensate for their military asymmetry. This use of force is also subordinated to the overall goal of establishing political power and functions to enhance the group's position vis-à-vis the state. The military activities serve to either strengthen the insurgency itself by seizing territory and resources or to undermine the opponent. As aforementioned, the latter might materialize in a protracted campaign of attrition that intends to erode a government's will. In sum, the combination of subversion, guerrilla, and terrorism renders insurgencies formidable opponents who are not only highly capable of establishing control over a target population, but due to their elusive and persistent character are also extremely difficult to fight. The wars in Iraq and Afghanistan have illustrated this repeatedly. Despite many tactical successes, the intervening forces and their local allies did not defeat the irregular opponents. Both the various Iraqi insurgencies and the Taliban in Afghanistan never lost their ability to exert (and expand) influence over significant parts of the local population.



How can Western-style militaries tackle the challenges of irregular warfare? It is clear that the operational problems encountered differ tremendously from the conventional battles most armed forces are optimized for. Practicing irregular warfare requires the ability to operate among the population and deploy a mix of kinetic and non-kinetic activities as demanded by the operational puzzle at hand. Successful adaptation, therefore, not only requires a change of mindset, but also integration of nonmilitary means in the military organization. Western armed forces, in this regard, have developed five types of operations that allow them to operationalize their irregular warfare capabilities. Obviously, the first two kinds of operations are counterterrorism (CT) and counterinsurgency (COIN) as these forms of irregular warfare pose the most widespread threat. The following two types, stability operations (SO) and security force assistance (SFA), are intimately related as they seek to mitigate such threats by bolstering, respectively, a fragile host nation's overall ability, or more specific the capabilities of local security forces. These four kinds of operations, thus, are all intended to counter irregular threats, and therefore they can be characterized as defensive strategies – which do not exclude a more offensive character at the operational or tactical level. But what about the offensive use of irregular warfare? This is addressed by the last type of operation, unconventional warfare (UW), which is all about “being irregular” as it encompasses the deployment of (support to) irregular activities to undermine an opponent in an indirect way.

By discerning these five main types of irregular warfare operations, this analysis more or less concurs with US Irregular Warfare Joint Operating Concept 2.0 (The main difference with the Joint Operating Concept lies in the fact that it does not include security force assistance, but instead contains so-called foreign internal defense. The latter kind of operations is unique to the USA and concerns the deployment of military and other means in support of a host nation's efforts for protecting its society against irregular threats. For the military this typically boils down to security force assistance operations, which as such is embraced as a key activity by, among others, NATO. It should also be noted here that work on a new US Irregular Warfare Joint Operating Concept is in progress.) (Department of Defense 2010). This concept also highlights the overlap between the different types and explains that a coherent campaign against an irregular threat might include any mix of these operations undertaken in either sequence, parallel, or in blended form. Both the wars in Afghanistan and Iraq, for instance, have included all different types of operations. Especially in Afghanistan – and to a lesser extent in Northern Iraq – the emphasis first lay on unconventional warfare, while the main part of both campaigns encompassed a mix of counterterrorism, counterinsurgency, and stability operations, for which security force assistance was also necessary. Since massive commitment of forces ended, the focus in both wars has shifted to this latter type supported by counterterrorism when necessary. Whereas the main forms of irregular warfare operations, thus, can be deployed in any combination or on their one, they all share a dependence on several other key activities. Among these activities, intelligence gathering is probably most salient as its nature differs considerably from regular warfare. Solving the identification problem, after all, requires a thorough understanding of the human terrain which demands different knowledge and skills

than analyzing the whereabouts and intentions of conventional enemy formations. Similarly, the population-centric nature of irregular war also requires armed forces to engage in activities such as strategic communication, information operations, and psychological operations. These, however, are always conducted in support of the five types of irregular warfare operations, and hence this analysis will focus on these main forms.

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## Counterterrorism

The special forces raids that eliminated Al Qaeda leader Osama bin Laden (2011) and the Islamic State's self-proclaimed caliph Abu Bakr al Baghdadi (2019) are often portrayed as the epitome of the fight against terrorism. Yet, such operations form only the tip of the iceberg as counterterrorism typically demands a much wider, whole-of-government approach that, among others, also addresses the causes of violent extremism and the financial backing of terrorist organization. Even the military role itself is much broader than killing or capturing terrorists. In addition to being an integral part of a state's international (counterterrorism) policy, armed forces are also deployed in support of domestic civil authorities. Here, however, the focus lies on the former, as this has become a staple of military studies.

Whereas counterterrorism at the strategic level is a defensive, reactive strategy, operations abroad in general hold an offensive character; they mostly serve the purpose of retaliating against the perpetrators of an attack or preempting (new) terrorist deeds. In case of state(-sponsored) terrorism retaliatory attacks seem an obvious choice to coerce the target state to give up its backing of terrorist groups. Such operations mostly have a conventional character as illustrated by the 1986 US air raid against the Gaddafi regime following the bombing of a nightclub by Libyan agents. Even when the terrorist threat comes from an elusive nonstate actor retaliation might be exerted. An example is provided by the launch of cruise missiles against Al Qaeda targets in Sudan and Afghanistan in the wake of the 1998 East Africa embassy bombings. Yet, overall the effectiveness of retaliation is doubtful as this might also provoke new terrorist attacks or escalate in full war. In both mentioned examples the terrorists reacted with even more vicious attacks, respectively, the bombing of a Pan Am airliner that came down at Lockerbie and, most infamously, the 9/11 attacks on the Pentagon and the Twin Towers. It should also be reminded that the Afghan War originally started as a punitive campaign against the perpetrators of those latter attacks. Under the banner of the GWOT this counterterrorism operation soon resulted into a protracted irregular war.

As the GWOT expanded, its rationale shifted from retaliation into preemption; fighting terrorists "over there" was considered far better than awaiting terrorist attacks at home (Boyle 2018). This led to the conduct of counterinsurgency, stability, and security force assistance operations as part of the overarching counterterrorism strategy. Counterterrorism operations, however, have remained at the forefront and also have assumed a preemptive character that serves to deter or disrupt terrorist organizations (Finegan 2018). While mopping up hideouts and eliminating terrorist

leaders might be considered traditional military tasks, such preemptive operations have quickly evolved during the GWOT. Special forces took the lead in optimizing the targeting process which has resulted in operations designed and executed conform the “find, fix, finish, exploit, and analyze” (F3EA) concept (McChrystal 2011). This encompasses finding the target by the combined efforts of analysts, fixing the target with observation means such as unmanned aerial vehicles (UAVs), the actual execution of the operation (“finish”) by combat teams, exploitation of the intelligence gathered during the operation, and analyzing this into new actionable information. This methodology has allowed Western armed forces to capture and kill violent extremists in an unprecedented, relentless pace. Additionally, UAVs have become ever more important in the execution of targeted killings. This combination of the so-called “drones” and special forces provides politicians with a relatively cheap and low-risk option for taking the fight to terrorists and preempt any new terrorist attacks. Among others, this development has led to the emulation of special forces actions by conventional units. Far more important, however, is the tendency of senior political and military leadership to rely on this relative cheap option exclusively. As mentioned at the very beginning of this section, counterterrorism requires a wider approach and too much emphasis on targeting might turn out counterproductive, especially since its long-term effects are uncertain.

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## Counterinsurgency

Whereas military operations in counterterrorism have evolved into highly specialized kinetic activities, counterinsurgency operations are of a more comprehensive nature. Western militaries have adopted the ideas of the so-called population-centric school of counterinsurgency which aims at defeating an insurgency by winning the struggle for the population. The general idea of this indirect approach is to strengthen the legitimate authority of a government and thereby enhance its control over the involved society, while simultaneously weakening the insurgent’s ability to exert influence over the populace. This contrasts the enemy-centric school that involves the use of brutal force to wipe out insurgents and their supporters and which is typically practiced by authoritarian regimes. Due to the identification problem, indiscriminate force is almost inherent to this form of counterinsurgency, and mass casualties are no exception. The actions of the Assad regime during the Syrian civil war are a case in point. This explains why Western militaries have taken the population-centric turn in counterinsurgency. How has this materialized in operational art?

To start, counterinsurgency demands adaptation to both the specifics of the operational environment as well as the tasks at hand. Kinetic activities are conducted amidst the people and therefore force should be applied carefully. Equally important, troops also have to conduct nonmilitary, non-kinetic tasks which often differ tremendously from the jobs they originally trained for. In this regard, counterinsurgency roughly reflects Krulak’s concept of three block war as soldiers should be capable of shifting between various complicated tasks ranging from delivering aid,

reconciling feuding factions, and fighting the insurgents (Krulak originally used this concept for describing the military's role in the complex peace keeping situations of the 1990s.) (Krulak 1999). Indeed, counterinsurgency encompasses three core activities, sometimes labeled the 3 Ds as they respectively cover the fields of Defense, Diplomacy, and Development. This distinction clearly hints at the whole-of-government nature of counterinsurgency campaigns. These undertakings, therefore, are interagency efforts that involve different governmental agencies, as well as contributions from international and nongovernmental organizations. The truth is, however, that such a comprehensive or integrated approach is difficult to realize in modern warfare in which coalitions of various countries fulfill an important role. Even a relatively well-oiled bureaucracy like NATO found it very difficult to implement this in Afghanistan. Moreover, as especially civil agencies suffer from a lack of capacity for foreign deployments, soldiers bear most of the burden. This not only manifests itself in the fact that troops fulfill military as well as nonmilitary tasks, but also in the fact that such endeavors typically are designed and led by the military – whereas joint civil-military leadership would be ideal.

In order to put this complicated comprehensive approach into practice the most influential counterinsurgency doctrine, *US Army Field Manual 3–24*, prescribes that a task force's operational framework should consist of various lines of operations that are intended to orient the force toward and reach goals in all three core realms (The original 2006 version of the *FM 3–24* talks about lines of operations, while the 2014 revised version renames them lines of effort. The former version functioned, among others, as the guideline for the turnaround in US operations in Iraq during the 2007 Surge and NATO operations in Afghanistan around 2010–2011. As a consequence of its importance in modern warfare this analysis has opted to maintain the terms from the 2006 version. The 2014 revision, however, is based on an even better analysis of the operational challenges and is a worthy successor of the original publication.) (Department of the Army 2006, 2014). Examples include combat operations and security force assistance – which thus can be included as a subtype of operations in counterinsurgency – to step up security, socioeconomic aid and provision of essential services in order to boost development, and promotion of good governance to enhance the legitimate authority of the (host-nation) government. It has to be mentioned that this closely matches stability operations which, therefore, can be part of counterinsurgency. This will be further dealt with below.

Since in counterinsurgency it is all about winning the competition for the population, it is important to realize that every action potentially exerts influence. Hence it is important that soldiers develop sufficient situational awareness and that all activities are closely synchronized. This latter aspect is covered by so-called information or influence activities, a separate line of operations that seeks to maximize the counterinsurgents' influence on the local population and that also aims to influence the perceptions of people in the wider region and at home. Ultimately, however, all of this depends on situational awareness as a proper understanding of the social landscape is a prerequisite for both the design and the conduct of operations among the people.

The wars in Iraq and Afghanistan have spawned some harsh lessons on the actual conduct of counterinsurgency operations in the everyday reality of modern warfare. On the tactical level a bifurcation of tasks could be observed; special forces adopted their counterterrorism targeting practices for deterring and disrupting insurgencies, combat forces focused on securing the population, and specialized Provincial Reconstruction Teams (PRTs), which also involved civilian experts, delivered development aid, and strengthened the local government. Optimal operations required the integrated deployment of these tools, and despite their specialization, all types of units could be confronted with the need to shift between various tasks as demanded by the local situation. Another key insight concerns the rationale beyond the strengthening of government. Whereas the initial focus in both Iraq and Afghanistan lay on establishing a working democracy, this gradually altered into a more hybrid form of government including local power-holders who enjoyed legitimacy on other grounds than being elected. Such leaders, for instance, were instrumental in the 2006–2007 Anbar awakening which gave a huge impetus to the campaign in Iraq. As mentioned afore an appropriate understanding of the local society is pivotal, and as campaign plans were adjusted to this new insight, soldiers also benefited by integrating the so-called key leader engagement (KLE) in their daily routine. The pattern of legitimate authority in the target society, therefore, should be incorporated in both the design of campaigns and the actual conduct of operations (Kitzen 2017).

The ultimate lesson of both wars concerns the failure of counterinsurgency. While significant adaptation led to operational successes, the overall campaigns stalled due to a lack of will from the side of the intervening states. It simply took too long to adopt the right strategy. A RAND study has revealed that the average time needed for achieving success after implementing effective practices is 69 months (Paul et al. 2013). That amount of time, however, seems too much considering the lack of political patience that could be observed in both cases (In Iraq effective practices were adopted during the 2007 surge, while in Afghanistan the revision of the campaign which was completed in 2011 had a similar effect. End of the counterinsurgency missions took place in 2011 and 2014, respectively.). Combined with the relatively limited resources, this time pressure has acted as a catalyst for the emergence of so-called counterinsurgency lite or accelerated counterinsurgency (Kilcullen 2012). This new form of counterinsurgency envisions the simultaneous and mutually amplifying deployment of targeting, security operations, and reconciliation efforts in order to achieve an acceptable level of control and stability within a limited amount of time. That result, consequently, serves as the underpinning for a long-term effort by the host-nation itself with support from the international community (through stability operations, security force assistance, and nonmilitary aid). As such the contours of future counterinsurgency have revealed themselves in the latter days of the campaigns in Iraq and Afghanistan.

## Stability Operations

Stability operations are intimately related to their counterinsurgency brethren. Actually, as mentioned afore, they might even be integrated in counterinsurgency efforts since they share many aspects; both encompass enhancing the population's security, delivering development aid, and advancing good governance. What, then, are the differences? First, the main purpose of stability operations is not to fight insurgencies, but to establish a stable environment in weak or failed states. The rationale underlying this concept is that irregular threats for international security might benefit from weakly or ungoverned spaces – so-called black holes – and, therefore, intervention is to act as a tool to forestall this. Strategically, stability operations, thus, are of a preventive nature. This echoes in their purpose which concerns effecting a transformation from a situation of potential violent conflict toward a viable long-term solution (Tuck 2014). Counterinsurgency, by contrast, aims at establishing an acceptable level of stability. While stability operations in the past have been criticized as social-engineering efforts pursuing the utopian long-term goal of building Western-type states in fragile countries, recent experiences have led to more realistic approaches that foster sustainable local solutions. The rule that “social context is king (Kitzen 2016),” therefore, also applies to stability operations.

A second difference concerns sequencing. Due to their nature these operations have traditionally been executed after the end of either an irregular or regular conflict in order to consolidate and expand the achieved level of stability and prevent the reemergence of violence. In irregular warfare, however, this process typically is far more complicated as weak or failed states lack an administrative infrastructure. Furthermore, stability operations are also closely related to peacekeeping and peacebuilding since they are mostly conducted in the post-conflict stabilization phase (Brocades Zaalberg 2012). Yet, when part of a counterinsurgency campaign, these efforts might take place while fighting is still ongoing. This can be explained by the character of counterinsurgency, which demands an approach tailored to the specifics of each locale. Even when the overarching conflict has not been settled yet, the situation at the grass roots level can differ tremendously. A counterinsurgency force, therefore, might need to focus on fighting the insurgents in one place, while conducting stability operations in another. Lastly, this type of operations is also heavily relied on to prevent the outbreak of a potential irregular conflict. So-called phase zero or contingency operations concern the deployment of forces to a country in (an emerging) crisis caused by either an internal threat or spill-over from regional conflicts. While often executed by special forces, this might also be executed by regular units as, for instance, can be observed in various missions assisting countries in the Sahel.

Ideally stability activities require close civil-military cooperation at all levels. However, just like in counterinsurgency, reality mostly boils down to the fact that soldiers perform the bulk of tasks. This is inherently related to the lack of long-term commitment, which hampers the adoption of long-term strategies for integrated deployment of different capabilities. Consequently, recent stability efforts have a

tendency to focus on security force assistance in order to allow a host-nation to maintain a secure and stable environment by itself. The follow-up of the counterinsurgency efforts in Iraq and Afghanistan provides a case in point as troop levels were quickly reduced and swapped for “Iraqization” and “Afghanization,” respectively. Whereas there is little doubt about the importance of training host-nation security forces, accompanying economic development support and aid for governance reforms lagged behind. Recent stability operations, therefore, have spawned the insight that the reemergence of grand strategy is pivotal for “shaping the way wars end and their aftermath” (Cordesman 2017).

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## Security Force Assistance

Security force assistance has already been mentioned repeatedly since this activity might be employed in support of all aforementioned types of operations. Moreover, it might also be part of regular warfare as this activity seeks to bolster a country’s ability to counter both internal and external threats. The focus here, however, lies on irregular warfare where security force assistance is conducted in support of a legitimate authority’s effort to fight irregular opponents like violent extremist organizations. The aim is to develop a sustainable capability that allows a government to durably maintain a safe and secure environment for its population. These operations encompass the deployment of relatively small groups of military personnel in order to help in (re-)building and (re-)organizing the host-nation security sector in its broadest sense. Typically, troops might be involved in educating, training, and re-equipping armed and police forces, border guards, etc. Another key activity concerns actual assistance during operations. This takes the form of soldiers performing advising, liaison, and mentoring duties in the field. Additionally, specialized units or assets might be dispatched as enablers for host-nation partner units. Examples include the deployment of air support, explosive ordnance disposal, medical, and intelligence capabilities. Thus, albeit that security force assistance operations require a relatively light foot print, they comprehend a whole range of different activities as well as a mix of units and assets tailored to the requirements of a specific host-nation.

The irregular warfare security force assistance mission has traditionally been the turf of special forces. Under the moniker “military assistance” operators set out to bolster partner units and when necessary other assets and troops were deployed in support of this effort. Recently, however, the trend has emerged that this mission is increasingly executed by regular units (Wiltenburg 2019). This partially is the consequence of Western reluctance to deploy large number of ground forces after the costly experiences in Iraq and Afghanistan. Instead interventions now preferably take the form of so-called “remote warfare” in which opponents like the Islamic State, Al Qaeda, Al Shabaab, Boko Haram, and the Taliban are fought by local partners predominantly (Knowles and Watson 2018). The US’ adoption of the so-called “by-with-through” (BWT) operational approach offers perhaps the strongest



illustration of this point. BWT, which has been a mainstay of, among others, the fight against the Islamic State, heavily relies on indigenous forces. It envisions that ideally operations are led *by* local partners (including local legitimate nonstate actors like the Syrian Kurds), *with* enabling support from US and coalition forces, and made possible *through* US authorities and partner agreements (Votel and Keravuori 2018). These developments have raised the demand for security force assistance and therefore these operations, while still part of the special forces mission set, have progressively entered the realm of regular units. Various armed forces in this regard have established specialized (and sometimes regionally aligned) units that focus on capacity building and forging partnerships with local allies. Thus, security force assistance is becoming more and more embedded in the thinking and organization of armed forces.

While these developments suggest that this type of operation provides a perfect solution to project combat power at minimal costs, there are also serious risks involved. Misalignment in interest between local authorities and governments deploying security force assistance forms a common risk that can seriously limit the utility of such operations (Biddle et al. 2018). This clearly demonstrates the endemic weakness of assisting troops under control of another party. Especially, when policy deviations between assisting and assisted widen, this might render missions ineffective or even counterproductive. In Iraq, for instance, the Shia-dominated government's sectarian course increasingly thwarted US efforts to rebuild the Iraqi security sector. This not only left the Iraqi armed forces ill-prepared for their tasks, but also played into the hands of Iran. Ubiquitous security force assistance operations, therefore, are no silver bullet, but should be practiced and monitored carefully and with a clear understanding of local interests and power dynamics.

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## Unconventional Warfare

The last type of operation is the only one that requires soldiers to act as irregulars themselves. Unsurprisingly, such unconventional warfare operations have been the domain of special forces with other components acting as enablers when necessary. This, however, is not only a result of their specific irregular, clandestine nature, but also because of the strategic effects that can be attained through these operations. Unconventional warfare is truly an instrument of statecraft as it allows a government to leverage (parts of) other populations to act in a way that serves its interest best. As such it might be deployed in support of regular warfare, against states who themselves wage war by use of nonstate proxies, or against occupying powers and nonstate actors that have successfully established control over a considerable population and territory. The purpose of these operations is either to coerce a hostile power to act in another way, to disrupt it by destabilizing its authority so it can no longer effectively take adverse actions, or to overthrow a (shadow) government or enforce the withdrawal of an occupying force. How exactly is this accomplished?



A typical unconventional warfare operation sees special forces teaming up with local resistance groups, insurgencies, or opposition groups (Brown 2017). Support to these irregular allies can range from supplying, training, and advising to actual combat assistance. All these activities take place to allow for the expansion of the support base and stepping up the momentum of antigovernment operations. The opposing government, thus, will suffer from both an erosion of popular support and attrition of its security forces. While such an unconventional warfare campaign might be a protracted effort that ultimately seeks to overthrow a hostile regime, it can be accelerated through the introduction of conventional forces. It should be clear, however, that the support of local irregular groups first and foremost serves the overarching strategic purpose. Depending on this purpose the alignment with such actors should be explored carefully prior to designing an unconventional warfare campaign. While differences in interests to a certain extent are unavoidable, most important is to vet whether there is sufficient common ground and shared interest to obtain the desired effects. This not only requires thorough knowledge of local irregular groups and their objectives, but also insight in their relations with the population as well as the potential they possess for successfully influencing people. Understanding the human domain, therefore, is essential for achieving success in unconventional warfare.

As a consequence of the emphasis on local irregular partners the costs and risks are relatively low. This explains why such operations are highly attractive in modern warfare. Just like security force assistance, this type seems increasingly important and seemingly fits new concepts like BWT as illustrated by the role of Syrian Kurdish forces in the fight against the Islamic State. Yet, this case also shows the importance of proper alignment as the sudden withdrawal from US forces in 2019 painstakingly revealed. Whereas the Islamic State's shadow government has been successfully defeated, the long-term consequences of abandoning the Kurdish allies might provide a serious backlash. This is especially significant as it creates doubt about whether irregular groups can trust the US and other Western countries as allies. In the current era of renewed big power competition in which hybrid warfare has enlarged the weight of operations below the threshold of overt conflict, unconventional warfare has become ever more important (Kilcullen, in this regard, has introduced the concept of "liminal (Latin for threshold) warfare" in which irregular actors seek to exploit the gap between detection, attribution, and response thresholds.) (Kilcullen 2019; Votel et al. 2016). Acting as a good ally, therefore, is more crucial than ever. Furthermore, in the near future unconventional warfare is expected to evolve considerably for enhancing the ability to influence populations and deal with threats in the so-called gray zone between peace and conflict. Due to the nonlinear character of current trends, however, it is unpredictable which direction this will take. Therefore, unconventional warfare operations should be assessed and adapted continuously to keep up with these developments.

## Conclusion

This chapter has repeatedly hammered at the fact that irregular warfare operations differ tremendously from the conventional, regular warfare activities for which Western armed forces traditionally have been optimized. Instead of defeating the opponent's armed forces on the battle field, irregular conflicts favor an indirect approach that concentrates at winning the struggle for the relevant population(s) and eroding the opponent's will. This violent struggle involves state and nonstate groups (including state proxies) which seek to establish power, control, and legitimacy over the people at stake. Combined with military asymmetry, the political nature of such conflicts materializes as a mix of unconventional or unorthodox kinetic and non-kinetic activities. Consequently, Western forces need to adapt to this form of warfare, the specific enemy, as well as the human terrain in which the struggle takes place.

In order to counter irregular threats militaries have adopted four types of operations of a strategically defensive nature. These are respectively counterterrorism, counterinsurgency, stability operations, and security force assistance. Obviously, the former two are responses to the most prevalent irregular threats of terrorism and insurgency, while the latter two are also closely related to the fight against these opponents. A fifth type of operation, unconventional warfare, is of a strategically offensive nature and encompasses the ability of armed forces to operate as irregulars themselves. This analysis has revealed that while success is hard to achieve and operational (as well as strategic) challenges might be tremendous, these five operations (either in combination or individually) allow regular militaries to effectively adapt to modern irregular warfare.

The here presented insights are the result of hard gained experiences that form the empiric evidence for the underlying field of knowledge. At the fundamental level this field seeks to understand the dynamics that define the nature of irregular conflicts as well as to answer strategic questions about, among others, the utility of force, the human terrain, and the character of asymmetric opponents. The need to operationalize irregular warfare has triggered studies on military adaptation as well as that it has led to the emergence of studies in terrorism and insurgency that seek to enhance the understanding of these predominant forms of irregular conflict. With regard to the different types of operations, counterterrorism and counterinsurgency have drawn the most scholarly attention. The effectiveness of respectively targeting and population-centric counterinsurgency remains topic of debate and thereby is firmly established on the research agenda. Related to this is the matter of remote warfare in which stability operations and security force assistance have also gained in importance to address the issue of how irregular wars might be fought far from home with relatively few resources. Last, unconventional warfare's link with hybrid warfare's imperative to operate below the threshold of overt war has triggered a growing academic interest.

The current state of operations in irregular warfare as both a field of practice and knowledge seemingly indicates that lessons are being learned. Yet, Western armed forces have a notorious bad track record of learning from irregular wars. Historically, a trend can be discerned in which a period of irregular experiences is followed by a return to the “normalcy” of regular warfare. This is not only a consequence of military culture, but also of the typical lack of political success in irregular warfare. Western armed forces, therefore, seem doomed to reinvent the wheel every time they need to adapt for waging irregular war (Kitzen 2019). After the experiences in Iraq and Afghanistan most militaries have again moved toward the downside of this cycle as lessons have not been properly institutionalized. While to a smaller extent some insights have been incorporated, the general trend is that militaries are again preparing for large-scale interstate combat. The reemergence of big power competition, in this respect, has acted as a catalyst triggering this reorientation. The hybrid character of modern warfare, however, requires the ability to conduct both regular and irregular warfare operations. Therefore, the cycle of unlearning irregular experiences should be broken and appropriate capabilities firmly embedded in the military organization and strategic thinking as soon as possible. This requires soldiers to think beyond the dichotomy of regular and irregular warfare and instead accept the idea of both forms as complementary and making up a continuum to be deployed against hybrid threats. Only by embracing irregular warfare operations and the underlying body of knowledge in addition to traditional tasks and ideas today’s militaries will prepare themselves for fighting tomorrow’s wars.

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## Summary

This chapter has explored irregular warfare as a contrasting form of warfare that differs tremendously from the regular, conventional warfare for which Western armed forces traditionally have been optimized. The underlying body of knowledge conceptualizes irregular conflicts as violent struggles involving non-state actors and states that seek to establish power, control, and legitimacy over relevant populations. Due to military asymmetry and the political nature of the struggle, the use of force mostly takes unconventional or unorthodox forms and is typically combined with other, non-kinetic activities. As such, irregular warfare favors an indirect approach that does not focus on military defeat, but on winning the population(s) at stake and eroding the opponent’s will. This forces conventionally focused armed forces to adapt to the specifics of an irregular conflict. In order to understand this adaptation process, the chapter has first discussed terrorism and insurgency as dominant forms of irregular warfare. Consequently, the five main types of operations that allow regular armies to adapt to irregular war have been described: counterterrorism, counterinsurgency, stability operations, security force assistance, and unconventional warfare. To conclude, the chapter has not only provided an insight in the way Western armed forces conduct operations in irregular warfare, but also reflected on the topic as a field of knowledge. From that point of view it has been argued that the topic is of enduring importance and that whereas regular and irregular warfare are

often considered dichotomous, developments in current warfare have revealed the necessity to consider both forms complementary. Modern militaries, therefore, should structurally embed irregular warfare capabilities in addition to their regular capabilities.

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## Cross-References

- ▶ [Counterinsurgency Operations](#)
- ▶ [Intelligence Operations](#)
- ▶ [Military Design](#)
- ▶ [National Strategy](#)
- ▶ [Peace Support/Building/Enforcement Operations](#)
- ▶ [Regional Studies](#)
- ▶ [Strategic Communication](#)
- ▶ [Strategic Culture in the Military](#)
- ▶ [Strategy and Doctrine](#)
- ▶ [What is Military Operations?](#)

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# Anthropology of the Military

Maren Tomforde and Eyal Ben-Ari

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## Abstract

The anthropology of militaries in industrial countries is a relatively young discipline, which has seen significant growth since the end of the Cold War and the advent of the “new wars.” The chapter focuses on the anthropological analysis of social and cultural concerns related to (and derived from) the armed forces, war, and the provision for national security. It charts the main clusters of issues anthropologists are engaged with and explains the unique contribution of this discipline through the following themes: militarization, fieldwork, military organization and units, gender, military families, veterans, and medical anthropology.

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M. Tomforde

Faculty of Policy, Strategy and Social Sciences, Command and Staff College of the German Armed Forces, Ratzeburg, Germany  
e-mail: [marentomforde@suedsinn.de](mailto:marentomforde@suedsinn.de)

E. Ben-Ari (✉)

Kinneret Center for Society, Security and Peace, Kinneret Academic College, Mevasseret-Zion, Israel

This chapter concludes with a discussion of anthropology's contribution to military education.

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**Keywords**

Anthropology · Violence · Cultural competence · Ethnography · Fieldwork · Militarization · Gender

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**Introduction**

Like other social scientists, anthropologists apply the analytical and theoretical approaches of their discipline – namely, ethnographic research methods – to the study of the military. The addition of anthropology to military studies is comparatively recent, beginning since the end of the Cold War. Of course, militaries have long used anthropological research for military purposes (Mohr and et al. 2019), but this chapter focuses on the anthropological analysis of “things military,” those social and cultural concerns related to (and derived from) the armed forces, war, and provisions for “national security.” Thus, we see military-related matters as referring to a much broader set of issues than the issues focused on the “armed forces,” issues that denote the practices and institutional arrangements centered on commanders and troops.

This chapter offers a review of the field with two aims: First to chart out the main clusters of issues with which anthropologists are engaged and, second, to explain the unique contribution of this discipline (Gusterson 2007; Simons 1999; Sørensen and Ben-Ari 2019). While there have been anthropological studies of warriors in more traditional societies and some newer work on armed non-state militias or resistance movements, our focus is on the state-sanctioned militaries of industrial countries. We primarily refer to major works published since the end of the Cold War to illustrate the topics studied in the field rather than a sustained bibliographic review.

We note that it is not easy to draw clear boundaries between anthropologists engaged with military topics and colleagues from related fields who also look at the armed forces through an anthropological lens. Most of the authors we review are social and cultural anthropologists by profession. Others have studied social sciences focusing on anthropological approaches, while others hold a degree in sociology, for example, but have incorporated anthropological ways of thinking into their research over the course of their careers. Finally, we limit ourselves to works in the English language on the assumption that they will be most accessible to a variety of readers.

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**Why Anthropology?**

The unique contribution of anthropology – and here we refer to sociocultural anthropology – is threefold. First, it offers a holistic approach to groups as part of humanity, which means that anthropologists try to place any subject they study – say



unit dynamics, commemoration ceremonies, or gender relations – in its wider social and cultural context. Second, the main method anthropologists use is fieldwork, which is usually undertaken in one extended period but sometimes during a series of short stints. In practice, anthropological fieldwork involves obtaining a rich and multifaceted picture of the groups or issues under study. However, since militaries belong to the security establishment, doing fieldwork – via observations, interviews, or other forms of gathering data – often proves difficult. Third, anthropology involves a comparative approach. Thus, military anthropology does not focus on the one case but, as much as possible, on comparing its differences from and similarities with other cases. Anthropologists do not always undertake sustained comparative studies, of course; each case is analyzed as having its own uniqueness that can only be understood against the background of other cases.

Given the relatively small size of the field of military anthropology, anthropologists have often found themselves in dialogue with and cooperating with qualitative and culture sociologists. Some of the analytical methods used by anthropologists in the study of the armed forces are shared with sociology, and some ethnographies penned by qualitative sociologists are similar to those produced by anthropologists. Further, some research projects discussed here have been carried out by anthropologists as well as sociologists, political scientists, psychologists, historians, and philosophers. Given the limitations of space, we restrict ourselves to anthropological work in this chapter. Similarly, while some military anthropology overlaps with the anthropology of security (Maguire et al. 2014; Samimian-Darash and Stalcup 2017), in this chapter we focus on the armed forces.

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## Anthropology and the Study of the Armed Forces

Militaries are large-scale, public organizations, and many studies of the military liken to, or differentiate them from, other such entities. Their defining characteristic is the production, management, and use of legitimate state-mandated (if sometimes contested) organized violence (Boene 1990). Hence, almost all anthropological studies of the armed forces deal in one way or another with this defining feature, whether it be the preparation for, use of, or the aftereffects of armed violence. In this regard, the relative paucity of anthropological studies of the armed forces in industrial countries until the end of the Cold War may be surprising. It is remarkable because violence – the physical or symbolic use of damaging physical force against other human beings – has been the object of intense anthropological scrutiny for a long time (Abbink 2000). Yet there have been relatively few ethnographic studies of the armed forces.

There are two interrelated reasons for the dearth of such studies. Anthropological studies of violence tend to focus on the victims' perspectives, often ignoring the perpetrators. Hence, ethnographers tend to study the underdog and the marginal, leaving the study of elites and the mainstream (including the military) to others, even though the study of elites provides insight into topics such as power, hierarchy, leadership, authority, and the construction of sociocultural identities. Thus, with rare

exceptions, anthropologists have for a long time usually ceded the study of the armed forces to sociologists, political scientists, and psychologists. It should be mentioned that military-related subfields in sociology and political science do not constitute very large fields either, leaving research gaps in these disciplines as well.

In choosing to research the military and militarization, anthropologists enter a politically charged area. Whereas many topics anthropology deals with are subject to a host of preconceptions, the military is arguably one of the most loaded, and is seen by many (if not most) anthropologists as morally tainted and therefore not worthy of anthropological research. But if we are to understand violence, it seems crucial to study both victims and perpetrators since violence is interactional (Tomforde 2017, p. 153 f.). The majority of American anthropologists, situated at the very heart of global academe, have viewed the US military in terms of the Vietnam War and, since 9/11, through the lens of the occupations of Iraq and Afghanistan. Consequently, armed forces have often been regarded as somehow not “worthy” of anthropological research, and anthropologists linked to the military have sometimes been seen as “polluted” (Ben-Ari 2011; Rubinstein 2012). Indeed, because of the pervasive belief in the discipline that war is pathological and because of a professional value orientation that opposes armed aggression, key cultural questions about conflict and the armed forces have gone unanswered.

This situation started to change at the end of the Cold War and the major transformations this period brought about. New kinds of studies began to emerge: Bickford’s (2011) ethnography of the effects of Germany’s reunification on the lives and identities of former East German officers, Ben-Ari’s (1998) analysis of an Israeli infantry battalion, Moelker and Schut’s “kinetic ethnography” of Dutch veteran bikers, Sztankai’s action anthropological study of the Hungarian Defence Forces (2014), and Tomforde’s (2009) research on changing German military cultures in peace operations. Especially with the new kind of warfare, combining older and newer forms, and variously termed “asymmetrical wars,” “hybrid wars,” “post-modern wars,” or simply the “New Wars,” anthropological studies of the armed forces developed rapidly.

While the Global South experienced the lion’s share of these wars, the new wars have also occurred on the doorstep of Europe and tore the Balkans apart. Violence that had previously been limited to “out there” has come “home,” as the areas traditionally studied by anthropologists became connected to anthropologists’ own home countries in new ways. Troops were deployed abroad in multinational formations, for example, and civilian urban spaces were transformed into battlespaces involving militaries and other security forces (Fosher 2009; Gustavsen and Haaland 2019).

Yet despite more anthropologists researching militaries globally, the tones (theoretical and political) tend to be set by scholars in US-based institutions. These scholars continue to influence what is considered appropriate or legitimate anthropological lines of inquiry, indeed to shape disciplinary norms about what is worthy of study (Ben-Ari 2016). In this sense, American military anthropology has been a font of stimulating dialogue but at times also a limiting force with its heavy concern (sometimes fixation) with the way our discipline has been “subtly moulded by the

priorities of national security state and the exigencies of other people's wars," a view that has been projected by default onto the global community of military anthropologists (Gusterson 2007, p. 156). Thus, it is important to understand that US-based scholars focus almost exclusively on the USA and its presence abroad, and they often generalize from that society's experience to the whole world (McFate 2019).

It is against this background that one must understand how often-acrimonious discussions in the USA have centered on the help anthropologists have given their armed forces in zones of conflict (Gusterson 2007). These debates arose after anthropologists (among other social scientists) were actively recruited into military frameworks deployed in Afghanistan and Iraq (Gusterson 2007; Gonzalez 2004; Kelly and Jauregui 2010; Lucas 2009; McFate and Laurence 2015). One outcome of these controversies was the negative labelling of any anthropologists working for the military, even in educational institutions (Fosher 2011; McNamara and Rubinstein 2011; Price 2011). With these controversies in mind, this chapter explicitly goes beyond the American case.

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## Key Themes of Research

In her review of the development of warfare at the turn of the century, Simons (1999) suggested that two subjects were still unexplored, the processes of militarization and the military establishments of the industrial democracies. This gap has not only been continuously filled since that time but supplemented greatly by other topics of research. In what follows, we chart out six key themes that comprise the field of the anthropology of the military. We have used two criteria for this choice: first, these themes are by far the most numerous in terms of scholarly interests and publications; and second, taken together they offer a comprehensive introduction to the variety of subjects that anthropologists study.

## Militarization and Militarism

A central concern for military anthropologists is processes of militarization through which institutions of civilian society are configured in the preparation for and the conduct of war. Militarization is simultaneously a discursive process involving a shift in societal beliefs and values in ways necessary to legitimate the use of force, the organization of large standing armies, and the higher taxes or tribute used to pay for them (Lutz 2002, p. 723). In addition, mobilization of civilian institutions for war is linked to the creation of hierarchies of race, class, gender, and sexuality. It is expressed in both public spaces and popular culture. Anthropology is methodologically well suited to capture the manifestations of militarization due to anthropologists' unique empirical methods, which go beyond and add to the institutional approaches of other disciplines.

Accordingly, anthropologists have focused on three main areas in the study of militarization and militarism. The first is its everydayness: the taken-for-granted

nature of militarized ways of thinking and how societies and groups are organized. Such studies illuminate the ways in which “things military” (e.g., institutions, people, values, symbols, or objects) are entangled with “things civilian” (e.g., people, social life, or popular culture; Sørensen and Ben-Ari 2019). Some of phenomena studied in this manner include popular cultural products in Japan (Ben-Ari 2019), material products, such as toys and movies in the USA (Lutz 2001, 2002), and the role of the Turkish armed forces in the country’s education system (Altınay 2004). As these studies suggest, anthropology seeks not only to address the classic issues of how societies affect the military, but to go beyond a focus on states and militaries, law, and politics. A second, closely related area of study has been public ceremonies and performances. Investigations by Ben-Ari and Frühstück (2003) and by Sørensen and Pedersen (2012) illuminate how civilians are exposed to the military as audiences at public events that demonstrate military capacities or in ceremonial celebrations of the warrior-hero.

The third area of the study of militarization that has received quite a bit of attention focuses on dissent and resistance, both to militarization in general and to the placement of military bases close to local communities (Fitz-Henry 2015; Inoue 2007; Lutz 2009; McCaffrey 2002; Schober 2016; Vine 2019). Agyekum (2019) challenges such analyses by arguing for “positive militarization,” where the armed forces use their resources and efficacious competences to support societies during crises by dispensing and managing relief. Whether the military’s role in operations other than war is best perceived as an example of increasing “securitization” of non-military areas (Fosher 2009) or is a “civilizing” (or better “civilianizing”) of the military, as Agyekum contends, can only be answered empirically. Sørensen and Ben-Ari (2019) delve deeper into the many forms of military-civilian entanglements and try to better comprehend processes of militarization of the civilian domains as well as the civilization of the military. In any case, it is important to consider how militaries’ benign activities are tied to their potential for violence and wide processes of militarization.

## Fieldwork

For anthropologists, who are used to studying various marginal others, the study of the armed forces – a central societal institution – raises a number of issues. The first is gaining access to the armed forces, given the secrecy surrounding national security. While some anthropologists have gained full access to military organizations (Ben-Ari 1998; Simons 1997; Tomforde 2016), others find that security concerns have limited them to short-term fieldwork or to interviews or post-deployment data (Pedersen 2019). The second issue is related to the risks, dangers, and implications of conducting fieldwork under fire (Ben-Ari 1998; Nordstrom and Robben 1996). Ethnographic work with military units in times of armed conflict is not unlike studies undertaken in countries marked by violence and disorder. The third concern surrounds the danger of researchers being seduced by high-ranking informants in the military. These elites may see talking to researchers as part of wider

attempts to create positive views of the armed forces and of themselves (Castro 2013; Robben 1996). The fourth issue concerns inevitable questions about the political and ethical positioning of researchers studying the armed forces (Weber 2016). The main challenges here, as Mohr and his associates (2019) argue, is finding the right critical distance – a mix of critique and empathy – from the studied subjects. Finally, the fifth topic deals with peace operations and all the stakeholders involved, including the military. Some anthropologists call for an ethnographic peace research (EPR) agenda to achieve a much-needed empirical turn within interdisciplinary peace research and more participatory approaches to peace on all levels.

## **Military Organization and Dynamics**

The study of the military as an organization is a rapidly growing area that focuses on socialization into military life and the culture of specific units (Katz 1990; Moore 2004), training centered on violence (Samimian-Darash 2013), and multinational peacekeeping exercises. Anthropologists have also penned full-fledge ethnographies of units (Ben-Ari 1998; Danielsen 2015; Irwin 2002; Simons 1997; Winslow 1997) and military bases (Hawkins 2001). Yet other analyses have focused on military cultures, such as those of the U.S. Marines (Holmes-Eber 2014) and the U.S. National Guard (Vest 2013), the British military (Kirke 2009), the Dutch forces (Sion 2004), and the German military in peace operations (Tomforde 2009). An important addition, especially given the methodological difficulties mentioned above, are studies of the actual experience of armed conflict (Bar and Ben-Ari 2005; Ben-Ari et al. 2010; Guber 2016; Pedersen 2019; Tomforde 2016) and of military occupation (Ben-Ari 1989; Ben-Ari 1998; Grassiani 2013). Such studies have focused on the particular character of the armed forces as specialists in armed violence to explore the kinds of folk and professional models internalized by soldiers, the learning of institutional rules and embodied practices of soldiering, and the experiences of using violence on or withstanding violence from others.

With the deployment of forces around the world during the past three decades, the study of multinational military formations has also developed significantly. The body of work in this field includes Rubinstein's (2003) exploration of the differing orientations to force and to peacekeeping that characterizes different militaries, the way different armed forces come to cooperate (Elron et al. 1999), and the place of women in peacekeeping (Sion 2009). From a different direction, some anthropologists have charted out global military connections, such as Gill's (2004) study of the training of other countries' troops in American military schools, Grassiani's (2019) exploration of retired Israeli military officers establishing security firms in Kenya, and Uesugi's (2019) analysis of the struggle of former Gurkha soldiers to obtain British citizenship.

## Gender and Sexual Orientation

The study of gender has seen an explosive growth in the social sciences generally. Research is devoted to the gendered nature of militaries (Altinay 2004; Duncanson 2013; Kilshaw 2009). Indeed, given the historical connection between manhood and war, it is not surprising that the military is an excellent site through which to explore masculinities. Examples of such studies include warrior-masculine identities (Winslow 1999), the masculine roles of female soldiers (Sasson-Levy 2003), peacekeeping and masculinity (Sion 2005), contested masculinities among Dutch soldiers after Srebrenica, and masculinities and the influence of the media and narratives of war (Cockburn and Zarkov 2002). Other anthropological studies deal with the multiple roles and challenges women face in the military and topics such as feminist militarism, positions of power of female soldiers in Israel's military (Hauser 2011), the influence of female soldiers in the transformation of the Argentine army (Bàdaro 2015), and the intersections of gender and power among women veterans (Cheney et al. 2013). A small number of anthropological studies has tackled issues related to homosexuality (Kaplan and Ben-Ari 2000) and trans-soldiers (Yi and Gitzen 2018).

Most of the studies on female soldiers and gender relations in the military discuss issues such as gender discrimination and the opportunities for agency available to women in the armed forces. When not restricted by masculine norms, women tend to be more open to values from different dimensions of their identities than their male peers. The agency of female soldiers does not usually resist or challenge institutional norms and structures associated with military masculinity. Instead, this agency is found in the different forms of individuality that female soldiers bring into the military through their everyday practices, ideas, conceptions, and behavioral patterns. In this way, they instigate (largely unintentionally) long-term organizational change within the military and help to redefine interactions between the armed forces and society at large.

## Families, Communities, and Veterans

An area well studied by anthropologists are the relations between the military and communities and families. One set of issues that has received special attention is ethnographic studies of the communities in and around army bases in the USA or abroad (Hawkins 2001; Lutz 2001; MacLeish 2013; Tanaka 2019). These studies explore the formal and informal ties among the services offered by the military, local commercial and economic relations, or, as stated above, resistances to these ties. A more recent addition are investigations of the relations between soldiers and their families or between the military as an institution and the families of soldiers (Heiselberg 2017; Sørensen 2015; Tomforde 2014). Here the focus has been on family support mechanisms and the armed forces' ways to mobilize families to help soldiers fulfill their roles.

Many studies of veterans focus on combat-related injuries and suffering. Anthropologists are more interested in the social positioning (both contestable and

changeable) of veterans and their experiences. In this vein, anthropological investigations address the social construction of public images of “the veteran” (Sørensen 2015) and how ex-soldiers are invariably linked to armed violence (as heroes or victims), or to the military as a symbol embodying the national collective.

## Medical Anthropology

In the field of medical anthropology, almost all contemporary work is devoted to the aftermath of violent encounters. As Hautzinger and Scandlyn (2014) argue, post-traumatic stress disorder, traumatic brain injury, and depression have been identified as the signature injuries of post-9/11 wars, and medical anthropologists have been exploring this field. Using ethnographic studies, anthropologists have often challenged psychiatric approaches by explaining the social dimensions of these disorders (Finley 2011; Kilshaw 2009; Messinger 2013). While contemporary wars are marked by fewer casualties than past ones, the use of improvised explosive devices means that many veterans need medical interventions and sometimes amputation. For many former soldiers, the body, which is central to the masculine warriorhood, has become the source of emasculation (Wool 2015; Wool and Messinger 2012). Other, less pathological, studies in medical anthropology include research on post-deployment reintegration of US troops and Linford-Steinfeld’s (2003) study of weight gain among US naval personnel.

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## Teaching Cultural Competence

Anthropologists have been hired to work in the educational institutions of armed forces for many decades now. The work they carry out involves a variety of overlapping roles. The first is simply to teach anthropology (Fujimura 2003). The second is teaching cultural awareness and intercultural competencies. While Gallagher (2017) cautions that being part of such institutions invites various political and ethical problems, today’s militaries need to prepare servicemembers for their multifaceted roles in missions abroad. Resolving today’s conflicts, which are typically based on complex ethnic, religious, economic, and political dynamics, requires more than military strength and technology. Today’s soldiers must also have various so-called soft-skills. In anglophone countries, training in this field is largely in language and “cultural intelligence” suited to interactions in various sociocultural settings. However, the focus on language has proven to be misdirected because areas of military operations change constantly, and language training offers only indirect help in understanding other cultures. In addition, the term “cultural intelligence” is problematic because it suggests that such knowledge belongs to the intelligence field and that it is not everyone’s responsibility to act in culturally appropriate ways in countries in which troops are deployed (Holmes-Eber et al. 2009; Parenteau 2020).

In the European context, cultural awareness and intercultural competencies are soft skills that military leaders at all levels need to succeed in difficult sociocultural



situations. Among the pedagogical challenges associated with developing such competencies are military students lack of openness toward social scientific concepts. Enstad's and Holmes-Eber (2020) analyzed how military cultural competence is developed in the military and the best didactic models for developing culturally reflective skills in military leaders. Research shows that mission experiences such as those from Afghanistan constitute an important impetus for change and for a structured intercultural lesson-learned process (Masson and Moelker 2020; Tomforde 2020).

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## Conclusion

Since the end of the Cold War, military anthropology has become an active field, engaging scholars from all over the world in researching the armed forces in many countries. Although a smaller subdiscipline than military sociology, military anthropology offers a unique perspective on "things military." Anthropologists' main contribution to understanding military organizations and their activities lies in providing rich, holistic, ethnographic data, and in analyzing the links between culture, structure, and action. Moreover, anthropological work illuminates how organization and social dynamics are related to, and embedded within, larger cultural and social structures and dynamics. The topics studied by anthropologists include sociocultural dimensions and dynamics of state organizations, the cultural transformation of armed forces, conditions leading to armed conflicts and peace, the multifaceted nature of violence and its varied impact on human beings, processes of militarization and civilianization, civil-military entanglements, contested gender roles and masculinity, and dimensions of multinational and cross-cultural encounters and settings.

Anthropological research highlights that things military are always interpreted, given meaning, and processed in manifold ways by all people involved, such as servicemembers, adversaries, and other stakeholders. Thus, experiences and interpretations of war, conflict, violence, and stabilization processes are always embedded in broader symbolic contexts and affect military organizations and societies. Looking at the future of the discipline's engagement with "things military," we foresee that accompanying a continued interest in the themes we have considered here, further developments based on the broader theoretical advances of anthropology.

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# Behavioral Economics in Military Personnel Research and Policy

Benjamin Sylvester, Damian O’Keefe, Steve Gooch, and  
Eugenia Kalantzis

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## Abstract

Behavioral economics is a burgeoning field of research that is being used to increase the effectiveness of military policies, programs, and operations. This chapter provides an overview of the origins of behavioral economics, key concepts, how behavioral economics research translates into applied behavioral change, and the rise of behavioral economics teams in government around the world. The chapter outlines how behavioral economics is being used within the military, with specific examples from Canadian Armed Forces (CAF) personnel research to illustrate how this field is being applied to military behavioral sciences.

## Keywords

Nudge · Choice architecture · Behavioural insights · Government

B. Sylvester · S. Gooch · E. Kalantzis  
Ottawa, ON, Canada  
e-mail: [ben.sylvester@forces.gc.ca](mailto:ben.sylvester@forces.gc.ca); [steve.gooch@forces.gc.ca](mailto:steve.gooch@forces.gc.ca); [eugenia.kalantzis@forces.gc.ca](mailto:eugenia.kalantzis@forces.gc.ca)

D. O’Keefe (✉)  
Director General Military Personnel Research and Analysis, Department of National Defence,  
Ottawa, ON, Canada  
e-mail: [damian.o’keefe@forces.gc.ca](mailto:damian.o’keefe@forces.gc.ca)

## Introduction

Governments around the world have sought to save money, improve services, and demonstrate the effectiveness of their services using Big Data. Approaches that bridge the gap between scientific discovery and implementation have received much attention and funding, especially behavioral economics (BE), which attempts to increase the effectiveness of policies, programs, and operations by influencing the decisions and behaviors of individuals. In recent years, initiatives based on BE have been appearing in governments around the world. From a military perspective, BE interventions have been primarily useful in enhancing military attraction and recruitment programs (see Behavioural Insights Team (BIT) 2015; Gooch and Kemp 2018; O’Keefe et al. 2018a, 2018b).

This chapter provides an overview of the seminal work and key concepts in BE, how BE translates into behavioral change, and the development of BE teams in government around the world. The chapter concludes with an overview of the work conducted in support of Canadian Armed Forces (CAF) personnel policy to illustrate how this field is being applied to military behavioral sciences.

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## Introducing Behavioral Economics

The field of BE grew out of the finding that people make decisions in two ways, one quick and intuitive, the other slow and effortful. Kahneman and Tversky (1972, 1973) and Stanovich and West (1998, 2000) were among the first researchers to investigate what came to be known as the dual-processing model of thinking. One way of reasoning (named System 1) involves intuitive, fast decision making, which, on the surface, appears devoid of reflection. Kahneman and Tversky (1973) found, however, that System 1 thinking generally relies on heuristics and prior learning (Stanovich et al. 2011). The other way of reasoning (called System 2) is what we conventionally associate with rational thinking; the more laborious, deliberate, and reflective thought process, which involves hypothesizing and requires working memory and general intelligence. This chapter deals mostly with System 1 thinking.

In recent years, the dual-processing model has reached mainstream media through books such as Daniel Kahneman’s (Winner of the 2002 Nobel Memorial Prize in Economic Sciences) *Thinking, Fast and Slow* (2011), Richard Thaler (Winner of the 2017 Nobel Memorial Prize in Economic Sciences) and Cass Sunstein’s *Nudge: Improving Decision about Health, Wealth and Happiness*, (2008), and Dan Ariely’s *Predictably Irrational: The Hidden Forces That Shape Our Decisions* (Thaler & Sunstein, 2008). These works were seminal in the field of BE and are must-reads for those new to the field.

Within the field of BE, researchers recognize that people do not always behave as predicted by classic economics, where individuals presented with a choice consider all available facts and select the option that maximizes their best interests (Kosters and Van der Heijden 2015). In contrast, BE recognizes bounded rationality, which means people do not have the cognitive capacity to process all available information

needed to make an optimal decision (Kosters and Van der Heijden 2015; Mullainathan and Thaler 2015). Even when decisions are less complex, the concept of bounded willpower (Kosters and Van der Heijden 2015; Mullainathan and Thaler 2015) recognizes that people tend to resist doing things they know are in their best interest, such as exercising more frequently or taking medications.

The fundamental insights of BE are derived from a series of experiments by Kahneman and Tversky (1973) showing that people did not make rational choices in various scenarios. More important for the development of BE were two further findings. First, these experiments revealed that – as the title of Ariely’s book suggests – people’s choices were *predictably* irrational, meaning their choices were found to rely on the heuristics associated with System 1 thinking. Second, and equally significant, the decisions people made were influenced by the way the choices were presented, which implied that modifying (what came to be called) the choice architecture could improve people’s decision making (Kosters and Van der Heijden 2015). The next section of this chapter looks at the heuristics people use to make decisions, while the following section looks at how the choice architecture can be modified to help people make better choices.

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## Heuristics People Use to Make Decisions

People often use mental shortcuts, known as heuristics, to quickly evaluate problems and make snap decisions. These shortcuts usually stem from individual experience, emotion, and personal subjectivity. Heuristics are especially relied upon when making decisions in stressful and ambiguous situations, which are often faced by military personnel. However, heuristics can be detrimental to deliberate, methodical problem reflection and rational decision making. Being aware of common heuristics is the first step in countering their effects and making rational decisions (Businessballs 2014). Following are common heuristics.

*Anchoring* and *adjusting* occur when salient but irrelevant facts and estimates influence (or “prime”) our decision making (Tversky and Kahneman 1974). One can influence a person’s estimate of the population of a city, for example, by providing them with the populations of nearby cities, which are often irrelevant facts.

The *availability* heuristic occurs when we mistake the frequency at which we see, hear, and read about events with their actual frequency (or popularity) and our likelihood of experiencing such events (Tversky and Kahneman 1973). Mass media strongly influences the availability heuristic. Suicides are far more frequent than homicides, for example, but homicides receive more frequent coverage in the media. Not surprisingly, therefore, survey data show that many people believe homicides are much more frequent than suicides.

*Representativeness* refers to a shortcut where we default to stereotypes and assumptions when dealing with unknowns which often lead us to make decisions about a situation based on how similar it is to a prototype we hold in our mind. This heuristic is heavily influenced by misinformation and individual experiences (Tversky and Kahneman 1974). In male-dominated professions such as the military,



the chances of a male being promoted over a female are higher because males fit the military leader prototype better than females.

*Loss aversion* is our general reluctance to concede or make changes because we value possessing things (more than the things themselves) and fear losing possessions (i.e., the pain of losing something is greater than the pleasure from gaining it; Kahneman and Tversky 1979). For example, people buy insurance because they have a need for security and have a desire to avoid losses and risk. Military personnel who have stronger loss aversion may be more likely to purchase additional insurance for their personal belongings while deployed.

*Status quo bias* refers to our propensity to “go with the flow” and our reluctance to change our current situation due to fear of the unknown or aversion to complexity – we prefer the more familiar choice over the less familiar (Samuelson and Zeckhauser 1988). For example, people in the military may settle into a role/location and be reluctant to get posted even though there are greater opportunities in a new role/location. To counter status quo bias, many countries have changed the default on organ donation forms from *opt-in* to *opt-out*, which has substantially increased the donor population.

*Framing* refers to the finding that the way information is presented influences how we interpret that information. That is, the description of the choice or situation matters (Tversky and Kahneman 1981). Closely related to framing is *priming*, which means we are predisposed to certain feelings under certain conditions and that exposure to certain stimuli influences how we respond to subsequent stimuli (Kahneman 2011). A UK study on minority police officer recruitment testing used a priming message to encourage applicants to consider their presence in the police force as a valued social identity vis-a-vis underrepresented communities (i.e., “... what is it about being a police constable that means the most to you and your community?”). The message closed the gap in selection test scores between non-white and white applicants, suggesting that messaging to reduce stereotype threat (i.e., people aware of a negative stereotype about their group often worry about their performance) can reduce test anxiety for minority applicants (Linos et al. 2017). Similar messaging could be used to encourage women and visible minorities to consider a career in the military since research shows that they perceive themselves to be less fit for service and less confident in meeting entry standards (Manigart et al. 2018).

The *spotlight effect* arises from the belief that our actions are more visible to others than is really the case. This heuristic is mostly driven by fear of embarrassment, making mistakes, and criticism, which can lead to poor decisions. Of course, most individual actions are almost invisible to other people (Gilovich et al. 2000). Spotlight effect is especially prevalent among people who are high in self-monitoring (i.e., being highly conscious of one’s actions or appearance). Brand marketing, for example, exploits the spotlight effect by persuading us that a product is popular among our peers (e.g., wearing a brand-name shirt because people notice). Another example of the spotlight effect is when military recruits believe others (outside of the military) are evaluating their performance on cognitive ability tests, despite knowing these tests are confidential.

The *following the herd* heuristic refers to our desire to conform to a perceived norm to be part of a group and our need for affirmation and to avoid risk. This shortcut underlies peer pressure, the “mob effect,” and the spread of myths, fashions, and fads (Scharfstein and Stein 1990). The following the herd heuristic could explain why normally law-biding people might be influenced by mob mentality that transfers a peaceful rally into violence and looting.

*Optimism* is bias toward underestimating the costs, timeframes, and complexities of a challenge, as well as overestimating its benefits. This shortcut can lead to denial, waste, insufficient planning, as well as unmet deadlines (Weinstein and Klein 1996). Many large projects undertaken in the public and private sectors are neither on-time nor on-budget, largely due to the optimism heuristic. The optimism heuristic can also explain why we engage in unhealthy but immediate, self-gratifying behaviors such as smoking, drinking, and overeating; we optimistically assume that the negative consequences of unhealthy behavior (i.e., poor health) are unlikely to materialize for us.

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## Using BE to Promote Prosocial Behavior

From a policy perspective, BE proponents argue that leaders and organizations should move away from traditional control mechanisms, such as banning certain options, punishment, regulations, and financial incentives. Instead, policymakers should use BE interventions to change an individual’s choice architecture. The examples provided for each BE technique below have not been tested but are based on existing evidence. These examples are provided to give you a sense of how BE can be applied to military behavioral research:

- **Provide information.** Letting women know that they have a high chance of success in basic training (e.g., 9 out of 10 women pass basic training) could aid recruitment efforts by encouraging women to enlist (Khan and Hardy 2018).
- **Attract attention.** Use attractive signs and display cases for healthier eating options in military cafeterias, for example, to encourage members to choose healthy foods (Winkler et al. 2016).
- **Persuasion.** Display images of strength and success of those who have been injured in combat to persuade others to use services available to ill and injured military members (c.f. Park and Crocker 2013).
- **Reciprocity.** Including some gear (e.g., t-shirt) in promotional material for prospective recruits, for example, could prompt individuals to reciprocate by registering for future events/more information (cf. Cialdini and Goldstein 2004).
- **Social norms.** Because people look to others to inform their own decision making, perhaps indicating, on a military recruiting website, the number of people who have started an online application may influence others to consider the military as a career (cf. Cialdini et al. 1990).

- **Personal touch.** Including a note of encouragement or congratulations in an email or letter, for example, can encourage military applicants to continue with the recruitment process (Dolan et al. 2012).
- **Default options.** Altering the default option on registering for veteran services forms from an opt-in to an opt-out, for example, could increase uptake (Halpern 2016).

These and other techniques are used to develop nudges, which are unintrusive, low-cost, interventions that increase the likelihood of people selecting a particular option (or engaging in certain behavior) without restricting freedom of choice (Halpern 2016). Nudges encourage prosocial behavior, are open and transparent, and allow freedom of choice. People generally support nudges when they think that they have a legitimate purpose and when the objective is consistent with social interests and values (Reisch and Sunstein 2016). Nudges employ a variety of techniques to leverage heuristics and biases by altering the choice architecture presented to the individual – that changes how they view the relative attractiveness of the choices available to them (Kosters and Van der Heijden 2015; STSC 2011). As discussed later in the chapter, nudges can be used in military organizations in areas such as encouraging applicants to continue the application process; reducing test anxiety; and promoting healthy lifestyles.

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## Early BE Teams in Government

Governments began creating BE teams in 2010 when UK Prime Minister David Cameron established the Behavioural Insights Team, which later became known as the Nudge Unit (Halpern 2016). Headed by Dr. David Halpern (a psychologist), this team implemented relatively simple, low-cost interventions that influenced prosocial behaviors. Beginning with text messages, rewording letters, and sending personalized emails (Rutter 2015), their objective was to “improve the efficiency and effectiveness of government policies, without requiring anyone to do anything” (Halpern 2016: foreword by Richard Thaler). In February 2014, the team broke out of government and became a private entity (Rutter 2015). Its reach has disseminated across Europe and internationally, with projects undertaken in France, Germany, the US, Canada, and on behalf of the European Commission (Kosters and Van der Heijden 2015) and the World Bank (Halpern 2016).

In 2014, the US White House Office of Science and Technology Policy stood up the Social and Behavioural Sciences Team (SBST) whose goal was to “translate findings and methods from the social and behavioural sciences into improvements in federal policies and programs” (SBST 2015). Since the change of administration on January 20, 2021, a new *Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking* was issued. It restores the Executive Order under President Barack Obama that stipulates policies and programs be informed by behavioral science. In Canada, Canada Revenue Agency (CRA) has explored behavioral insights techniques as well. The CRA included

positive and negative prompts in letters that were sent to those who owed taxes and obtained a modest increase in the number of people who visited a web page, but did not change the amount of income they reported, or the number of people who requested a correction to their tax return (Results of the Canada Revenue Agency's 2015-2018 Underground Economy Strategy, 2018). Further, the Privy Council Office Innovation Hub has been supporting federal departments and agencies in applying novel policy and program tools since 2015 (Central Innovation Hub Privy Council Office, 2016).

An example of the Privy Council Office Innovation Hub's work is its social media study aimed at encouraging recruitment of women into the Canadian Armed Forces (CAF), undertaken in concert with the Department of National Defence. The trial involved social media (Facebook and Instagram) messaging and imagery along several themes, including humanitarianism, the educational benefits of the CAF, and the general challenge of being a CAF member. The most salient message was one challenging assumption about women's success in military (e.g., the campaign used the figure "9 out of 10 women succeed at basic training – be one of them!"). The message received one of the highest responses, amounting to over 3% of visitors clicking on the ad. This result significantly outperformed the Canadian government average for social media, which is typically at about 1% of visitors (Khan and Hardy 2018). These results help inform military recruiters with regard to recruitment campaigns, including campaigns aimed at underrepresented groups such as women.

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## Using BE to Support Military Personnel Policy

Despite the transparency of BE in government, there is a dearth of evidence that BE is used in militaries around the world. Principles of BE may be used internationally by military organizations, but BE research in military contexts is not always documented in academic journals or easily located. Two examples of using BE in military contexts include the UK and the US. In the UK, BIT (2015) reported a study in which they increased the proportion of candidates in the recruitment process who submitted their application form. Specifically, large numbers of people would dropout between the initial expression of interest in joining the Army and those who eventually signed up. By upgrading the existing customer relationship management system through emails and marketing communications materials, BIT was able to almost double the proportion of candidates who completed the process. In the US, use of BE in the military is primarily evidenced through media outlets. For example, America Abroad (2017) documented how the US military uses BE to fight ISIS. As one example of how BE has been used, leaflets that contained cartoon graphics were used to communicate safe routes for civilians to cross boundary lines and what they should do to cross lines safely (America Abroad 2017). Despite some evidence from BE team reports and media sources, credible documentation of BE research is needed to advance the global scope of BE in the military.

*Canadian Armed Forces Examples.* At present, apart from some work being conducted for the UK Army by BIT, there is little formal use of BE within military

organizations. Recognizing this need, in 2017, the CAF established a BE team, Personnel Research in Action (PRiA), within the Chief of Military Personnel's social science research laboratory (Director General Military Personnel Research and Analysis: DGMPPRA). The PRiA team develops and maintains expertise in BE program assessment, science-policy integration, and iterative design methods. In this section, we describe some work conducted by PRiA to provide an example of how BE can be used within military organizations to complement existing personnel policies.

In support of the Canadian Forces Recruiting Group, PRiA's first tasking was to develop nudges to encourage prospects to remain engaged in the recruitment process. To this end, a series of nudges consisting of personalized email messages that invited CAF prospects who had abandoned their application to continue with the recruitment process were developed (O'Keefe et al. 2018a, 2018b; Gooch and Kemp 2018). The inspiration for these nudges came from interventions designed by BIT (2015) to enhance the application process of the British Army Reserve. In addition, interventions were informed by the concept of social influence, which holds that people look to the behavior of others for guidance (Cialdini 2001), the MINDSPACE framework (Dolan et al. 2012), which suggests that the perceived authority of the messenger determines the strength of the message, and research by Durantini et al. (2006), which showed that people are more likely to act on information when the messenger is similar to themselves.

Several messages were trialed to see how they would influence CAF prospects to continue with the application process. For example, in one study (O'Keefe et al. 2018b), based on role-modeling research, three personalized messages were trialed (one from a male sender, one from a female sender, and one with no gender specified) to test whether the sex of the sender affected the application decisions of male and female prospects. In other research, a meta-analysis of mentoring studies reported a positive link between mentoring programs (i.e., role models) and career-related outcomes (e.g., career success, job satisfaction; Allen et al. 2004), but research on the role of same-gender mentors is mixed (see Lockwood 2006). Recent role-modeling research with college students (a similar age cohort as CAF prospects), however, has found that strong female role models have a stronger impact on female protégés than male role models but that the gender of the role model had no effect on male protégés (Lockwood 2006). Based on this research, it was expected that female prospects would relate more to the message from a female sender.

Using a randomized controlled trial, 3336 CAF prospects (2109 men and 1227 women) who had applied for the CAF, but their file was flagged for inactivity (i.e., they had not contacted the CAF recruitment center in the previous 90 days), were sent one of three messages (i.e., message from a male sender, a female sender, or a generic message). This method allowed the researchers to determine whether and what kind of message encourages prospects to continue with the application process. The emails resulted in 1786 visits to the CAF website and 152 prospects re-opening their application. In all messaging trials, about 5% of prospects re-opened their applications (O'Keefe et al. 2018a, 2018b), supporting the use of email messages to encourage prospects to continue with the application process.

Another Canadian study is examining whether brief interventions can improve the accuracy of selection test scores by reducing takers' test anxiety. Test anxiety is prevalent (Chang and Beilock 2016) and the level of anxiety recruits experience writing selection tests could adversely affect their performance on the Canadian Forces Aptitude Test (CFAT), which is an assessment of cognitive ability that candidates complete during the recruitment process. The CFAT likely evokes anxiety due to the significant career implications of the score. Thus, the CAF is examining whether two interventions (singly or in combination) can increase scores on the CFAT by mitigating mathematics anxiety. Mathematics anxiety was targeted because it is widely known to influence test-takers' scores (Chang and Beilock 2016).

Other Canadian military BE interventions have focused on improving health and fitness among CAF members. One project involves using nudges to reduce alcohol and tobacco use in the CAF; this project began with a realist review (Xiao and Watson 2019) of the complex social nudge interventions targeting alcohol and tobacco consumption (Sylvester & Gooch, 2021). Effective nudges used defaults to automatically engage people with the nudge (e.g., the size of glass that alcohol was served; reduced hours for alcohol purchases; Kersbergen et al. 2018). Ineffective nudges were those that aimed to indirectly change behavior (e.g., through an advertisement display or as a piece of information within a larger package) and required participants to pay attention to an external piece of information in order to be nudged (e.g., Brendryen et al. 2017).

Another health-related study looked at increasing completion rates of the CAF's annual fitness test (FORCE Test). CAF members are required to be physically fit, and the FORCE Test is an annual evaluation of health and operation-related fitness that informs senior leaders in the CAF about how many members are ready to serve. BE offers effective strategies for increasing attendance rates (Hasvold and Wootton 2011). Human error has been found to decrease attendance rates (e.g., healthcare appointments; Hasvold and Wootton 2011), and simple nudges, such as reminder emails, have been found to increase attendance (Boksmati et al. 2016). As such, email messages will be sent to commanding officers (COs) regarding completion of the FORCE Test among personnel in their unit.

Other BE interventions within the CAF involve supporting efforts to increase survey response rates. Survey research plays an important role in the organization by providing CAF members the opportunity to share their experiences and providing CAF leadership with data to make evidence-based decisions. Email reminder messages using BE techniques such as setting a deadline and endorsement from senior leadership appear to be effective in encouraging survey engagement and completion among CAF personnel (Sylvester, Howell et al. 2021; Sylvester, Gooch et al. 2021).

## Conclusion

Governments are increasingly using BE to influence prosocial behavior and to increase the effectiveness of policies, programs, and operations. Within armed forces organizations, BE researchers can help militaries improve policy outcomes and increase organizational and operational effectiveness and efficiency. This chapter provided an overview of the seminal work in BE, a brief description of the early BE teams in government, and some of the work being conducted by the CAF's BE team, *Personnel Research in Action*. As shown, within a military organization, insights from BE can be used to encourage (nudge) prosocial behavior (e.g., survey completion, reducing test anxiety, encouraging application completion). BE interventions are not meant to replace existing policy development activities (that primarily appeal to System 2 thinking) but to complement them. In doing so, military organizations can continue to implement best practices in policy development in support of the brave individuals who serve their country and the people they vow to protect.

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# Military Workforce Analytics

Michelle C. Straver

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## Abstract

As a consequence of the closed, hierarchical nature of military organizations, good planning is key to ensuring that a military workforce will be well-situated to meet future demands. This chapter explores the role of data-driven decision support (referred to as analytics) in military workforce planning. As an applied research field, analytics aims to provide actionable insights and practical solutions to questions posed by decision-makers. Since data underlie all analytics, this chapter touches on the challenges of data-related issues such as accessibility, integration, and completeness, highlighting the importance of understanding the

M. C. Straver (✉)  
Director General Military Personnel Research and Analysis, Department of National Defence,  
Ottawa, Canada  
e-mail: [michelle.straver@forces.gc.ca](mailto:michelle.straver@forces.gc.ca)

data and the context around it. Next, several areas where analytics are used to solve military workforce planning problems are discussed. This will give the reader a sense of the breadth of the domain, as well as the various approaches that can be employed by a practitioner.

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**Keywords**

Workforce planning · Analytics · Operational research · Modeling · Simulation · Recruiting · Attrition · Training system · Force structure

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**Introduction**

How many military members need to be recruited to meet future staffing requirements? How many women and members of different ethnic groups need to be recruited to meet diversity goals? Do members who join the military through subsidized education programs remain longer than their direct entry counterparts? Are attrition rates of military members increasing; and if so, are some groups affected more than others? Which military occupations are consistently understaffed, and what can be done to improve the situation? Are there bottlenecks in the training system that need to be addressed?

Unlike civilian organizations, military organizations have a closed, hierarchical nature, meaning that members join the military at the lowest rank and work their way up through the ranks over time as they gain skills and experience, until they are eventually released. This poses unique staffing challenges, and as such, even more so than other types of organizations, military establishments must understand their workforces in order to be able to continually meet their staffing requirements. Decisions made today can have long-term consequences.

Analytics can help to answer the above questions. Defined broadly, analytics refers to scientific means of using data and analysis methods to support decision-making, including the fields of data science, statistics, operational research, computer science, etc. These approaches have been used for decades for solving workforce planning problems; and while methods that have been used for many years remain useful today (most notably in the area of operational research), there is also potential to use emerging technologies to enable new insights. At the same time, military organizations are increasingly recognizing the importance of these capabilities, encouraging the use of data-driven decision support and seeking to take advantage of advancements in the field, which has come to be known as military workforce analytics (MWFA).

The remainder of this chapter begins by discussing the concept of MWFA as a research field, and an overview of the research process is given. Next, data considerations are discussed, with the aim of illustrating some of the challenges faced by MWFA practitioners. Finally, some common applications and methods are presented.

## MWFA as a Research Field

As an applied research field, analytics aims to support decision-making by providing useful insights and solving practical problems; but it is not necessarily concerned with the advancement of knowledge for its own sake. This is certainly true in the area of military workforce planning, and it raises the question of whether it should truly be considered as “research.” Although an academic may focus their research on a military workforce planning problem, most work done in the field is in direct response to military clients’ questions; and as Manson (2006) comments more generally about operational researchers outside of academia, practitioners generally have little interest in whether their work is considered “research” or not.

Even so, a strong argument can be made to suggest that the field is indeed research – more specifically, an implementation of design science research (also referred to as design research or constructive research; Vaishnavi and Kuechler 2004). Although it is a multidisciplinary field with broad applications, design science research is frequently applied to the development of information systems, including analytics-related products such as business intelligence tools (Mwilu et al. 2016). Manson (2006) proposes that field of operational research fits in well with the design science research paradigm, and we suggest that this is true more generally for MWFA.

Design science research involves creating an “artifact” and analyzing the use of that artifact to make further improvements. Through the process of analyzing how well the artifact meets its intended purpose, new knowledge is gained, and this knowledge is used to further develop the artifact and to inform solutions to problems. When applied to the MWFA domain, the artifact might be a method of integrating data from various sources, an algorithm for forecasting attrition, a model that simulates the flow of personnel through a training system, etc.

Vaishnavi and Kuechler (2004) compare the design science research perspectives with positivist and interpretive research perspectives and demonstrate that the design science philosophical assumptions are unlike the others (and in fact change throughout the execution of the research process). They describe the epistemology as “knowing through making.” Axiologically, design science researchers value progress (e.g., improvements to a method or model) and utility over absolute truths. In the field of MWFA, of paramount importance is providing value to military planners in the form of information or recommendations, delivered in a timely manner to enable improved decision-making.

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## MWFA Research Process

Numerous frameworks have been used to describe the process of conducting research in analytics-related fields, and most of them have several key elements in common: They begin with developing an understanding of the problem and the data; they involve the creation of an artifact (e.g., a model) and the evaluation of that artifact; and they end with the implementation of a solution.

MWFA practitioners rely heavily on military personnel data that are collected in corporate human resource information systems and other data repositories. Due to this data-driven nature, the Cross Industry Standard Process for Data Mining (CRISP-DM) process (IBM [n.d.](#)) appears largely suitable. It consists of six phases constructed as a cycle: business understanding, data understanding, data preparation, modeling, evaluation, and deployment. Not all MWFA activities will be related to the data science field that the CRISP-DM was intended for, but the general principles remain useful.

Drawing from some phases of the CRISP-DM process (IBM [n.d.](#)) in combination with some phases from the Peffers et al. (2007) framework for describing design science research, the following framework provides a useful illustration of the main phases of research in MWFA:

- *Business understanding*: This phase involves defining the question being asked (or alternatively, the problem to be solved), setting objectives, and making a preliminary plan to achieve them. Relevant information is gathered, which may come from clients, subject matter experts, policy documents, or previous studies (both from MWFA and from related fields such as organizational psychology and the social sciences). Practitioners should aim to understand the perspective of the end user, often a military workforce planner, and how the solution will be used, in order to be able to provide the most appropriate answer.
- *Data understanding*: The objective of this phase is to gather the data needed to solve the problem and to assess their completeness, quality, and limitations. By the end of this phase, practitioners should have a sense of how well the data will help to solve the problem, and may already have an idea for how limitations can be overcome.
- *Data preparation*: This phase involves preparing the data to the point where it can be used in a model or other artifact. Data preparation may involve merging data sets (and dealing with any technical issues that arise), selecting a subset of data (e.g., a specific segment of the military population to be studied further), dealing with missing values (e.g., by ignoring the data point, or by estimating its value based on other information), etc. In the CRISP-DM process for data mining, data preparation is estimated to take 50%–70% of a project's time and effort (IBM [n.d.](#)). This is often true for MWFA projects as well.
- *Design, development, and demonstration*: In the business understanding phase, the practitioner will have come up with a preliminary plan; and after having prepared the data, it will be possible to determine whether the plan is still appropriate. The plan may need to be amended if, for example, there is insufficient data to implement the desired solution. Further, given that the MWFA is often done to support military users' operational needs, it is necessary to ensure that it will be feasible to deliver a solution to them in a timely manner. At this point, an artifact is created and an initial solution (e.g., set of modeling or analysis results) is produced.
- *Evaluation*: In this phase, practitioners verify that the solution meets the objectives and is correct. Experienced practitioners will have a sense of what "looks

right,” and tests can be done to ensure the behavior of the artifact is as expected. When unexpected behavior is found, the cause should be identified. It could be that an error was made or that a data limitation was overlooked. During this stage, errors and areas for potential refinement may be identified, and the practitioner would then go back to the previous phase to implement improvements. The required level of accuracy should be considered – there will be situations where the value added by increased accuracy will not justify the amount of time and effort needed to achieve it. After the solution has been found to be satisfactory, practitioners should identify the main findings; not only those to be passed on to the military user, but also those of interest to other MWFA practitioners or others involved in military workforce management.

- *Deployment:* The final phase involves communicating the findings (as well as recommendations where applicable) to the military client, often in the format of a report, presentation, or even an informal email. Technical details of the method are usually not included in reports for clients; however, they may be included in a separate scientific report intended for other MWFA practitioners (including in the academic literature in some cases). This way, the knowledge gained through the process, whether it be an element of data understanding, a process, or a methodological development, can be applied for other studies. In some cases, future outcomes will be monitored; for example, if an attrition forecast was made, the actual attrition will be measured so that the accuracy of the forecast can be evaluated, which could then inform the approach taken for subsequent forecasts.

Notably, several of the above phases can be interrelated and may be done in parallel (or iteratively). For example, discoveries may be made during the data preparation phase that increase data understanding. In cases where particularly complicated data sets are manipulated, the process of preparing the data may itself be a major component of the design, development, and demonstration phase, or new data requirements may be identified during this phase, requiring additional data preparation. And of course, findings from the evaluation phase may lead to increased data understanding, a need for additional data preparation, and further design, development, and demonstration.

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## **Data Considerations in Military Workforce Analytics**

Most military organizations collect a wealth of data about their members. Corporate human resource information systems typically hold data on military members’ demographic details (e.g., age, sex, marital status) and career histories (e.g., hire date, release date, occupation, rank, unit, position). Other systems may also contain useful data. For example, electronic health records for military members may be housed separately from the human resource information system for privacy or other reasons. Other information systems may contain data for operational purposes, such as performing recruiting functions, managing military taskings, or tracking readiness for deployment. Data on financial transactions may be housed in yet another

information system. Valuable sources of data may also be collected in spreadsheets managed by an individual for a specific purpose (e.g., schedules for a training institution), and subject matter experts can help MWFA practitioners interpret data and understand processes and procedures pertaining to the topic being studied.

Merging these rich data sources for MWFA is not without challenges. Data systems are frequently disconnected from each other, presenting difficulties with integration. A study by the RAND Corporation (Lim et al. 2019) noted that the military services of the USA identified the disconnected nature of their various datasets as potentially preventing valuable information from being used for analytical purposes. In some cases, it may be challenging, or impossible, for practitioners to gain authorization to access data, particularly when there are concerns about security or privacy (e.g., medical records).

Even when data can be accessed, practitioners are likely to encounter limitations. Given the focus on military personnel, it would be ideal to have high-quality data on the entire career of each current and recently serving member. Given that a military career may last 35 years or even longer in a few cases, this is impossible today since human resource information systems have not been in place for that long, or at least not in their current forms. In addition, data loss may occur any time a system is replaced, although this can be minimized if efforts are made to ensure good data management. As in other domains, data quality and latency can also present problems.

MWFA practitioners should be aware of the organizational context – for example, policy changes affecting the workforce and changes in administrative practices – during the timeframe for which the data were collected. This can be important for a range of analytics activities, including interpreting descriptive statistics and selecting historical data for use in a model. In 2010, for example, the New Zealand Defence Force implemented a civilianization program that resulted in a larger than expected increase in attrition, which was attributed to the program's negative impact on morale; in 2012, attrition then decreased after organizational changes were implemented to improve retention (Defence Communications Group 2013). Such policy changes must be taken into account when developing a graph of historical attrition rates for senior leaders or choosing attrition rates for a model used to determine the force's future intake needs. Similarly, a peculiarity in the data may be the result of administrative changes, such as a modification to the training system or a change in the meaning or usage of an administrative code, or a process-related reason for missing values in a dataset.

Naturally, it takes time for practitioners to learn the organizational context and administrative changes that can bear on a particular study, which presents challenges for onboarding new practitioners. Policy documents can be useful (although it can be difficult for practitioners to know exactly what to search for, and obsolete policy documents are not always maintained on corporate websites). Subject matter experts can be valuable sources of advice, and corporate knowledge will be gained over the course of one's career. As Hill (2020, p. 16) remarks, "algorithms will never replace human knowledge and experience."



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## Military Workforce Analytics Researchers

MWFA researchers may be civilian or military. They come from a range of academic backgrounds, including mathematics, physics, engineering, computer science, and data science, as well as operational research and management science. On top of having knowledge of analytical techniques, practitioners must have strong problem solving skills and an ability to think critically. Strong interpersonal skills are a necessity, since work is often done in interdisciplinary teams and in close collaboration with military clients and subject matter experts. Similarly, strong communication skills are needed to explain research and analysis findings to military practitioners who may not have strong research backgrounds. Creativity, agility, and perseverance are useful traits; data sets can be challenging to access, integrate, and generally make sense of, so a willingness to “dig deeper” to truly understand the data, and an ability to find workarounds to data limitations, is helpful.

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## Applications of MWFA

This section discusses several common areas where MWFA approaches are used. The intent is to provide a sense of the scope of the domain and an understanding of the ways in which analytics products are important to military leaders’ decision-making.

### Population and Attrition Monitoring

Although normally considered the most basic form of analytics, descriptive statistics remain relevant to many organizations (Pluralsight [n.d.](#)), and military organizations are no exception. Armed forces typically monitor general statistics pertaining to their personnel. In some cases, reports are published online and made accessible to the public (Defense Manpower Data Center [n.d.](#); Department of Defence [2020](#); Ministry of Defence [2020](#)). These types of reports are useful for monitoring general trends in the workforce; for example, they can highlight changes in attrition, illustrate changes in the population over time, and show how the actual population compares to the desired population on key aspects. Statistics on specific occupations – for example, the UK’s identification of “pinch point” trades (National Audit Office [2018](#)), Canada’s *Establishment and Strength Report* (unpublished), and Australia’s *Employment Category Status Report* (Australian National Audit Office [2017](#)) – can be used to monitor which occupations are chronically understaffed, which helps military workforce planners to identify occupations that may need additional attention. Even though these standardized reports may appear straightforward, it is typical for MWFA practitioners to be involved in their development since they have the expertise to correctly extract data from the human resource information system and to note any necessary definitions or caveats.

Military leaders are often interested in seeing how their organizations compare with those of other nations, so online resources available to the public are valuable for MWFA practitioners seeking answers to such queries. One topic of particular interest for drawing comparisons is the participation of women. This is an area with many opportunities for MWFA practitioners to collaborate with colleagues in other fields, such as the social sciences. A report from the North Atlantic Treaty Organization (NATO) Committee on Gender Perspectives includes various descriptive statistics on this topic from many nations, as well as information from other fields – for example, comparing nations’ policies of gender integration, work-life balance initiatives, and the prevention of sexual harassment and sexual abuse (NATO 2020). Some nations have published comprehensive multi-disciplinary reports on the gender-related issues in the military (Ministry of Defence 2014; Australian Human Rights Commission 2012), and countless other studies on the topic are available (Fasting and Sand 2010). These information sources can be useful for adding context to help explain underlying reasons for numbers that vary across nations.

Another topic that warrants comparison across nations is attrition. When searching for attrition rates of other nations’ militaries, MWFA practitioners will likely find them in online statistical reports or from other sources, such as unpublished materials from conferences or meetings, personal communications with counterparts in other nations, or even media articles. Practitioners should interpret these statistics with caution, however. Although several research projects have proposed ways to measure attrition (Okazawa 2007; Vincent et al. 2018), there is no standardized method used across armed forces internationally, making it difficult to make direct comparisons.

Ideally, practitioners would compute the attrition rates of other militaries with the method used in their own, using data from other nations (e.g., raw population and release statistics as applicable); however, these data are not usually readily available.

## Attrition Analysis

In addition to the high-level attrition monitoring and international benchmarking discussed above, MWFA practitioners may become involved in more in-depth attrition studies, which can answer questions like:

- How do attrition behaviors vary between men and women?
- How many members remain in the military after 20 years of service?
- Do members who enrolled through subsidized education programs remain in the military longer than those who enrolled through other entry plans?
- Which members are most or least likely to remain until the end of their first term?

There are several methods that can be used to approach questions in this area. For example, a simple depiction of attrition rates by years of service can effectively illustrate the career points at which members have a higher propensity to leave. Serré and Straver (2018) used this approach to demonstrate that women are more likely to

leave the Canadian Armed Forces beyond the 20 years of service point. A survival analysis involves tracking attrition of a group over time. Schofield et al. (2018) used this approach for the US Air Force to examine attrition over a 20-year time frame to provide insights into occupations requiring special attention; Steder (2014) used it to show the difference in “dropout” rates between men and women from the point of showing interest in the Norwegian Armed Forces to the point of completing one year of military service; and Straver and Pilat (2018) used it to explore differences in the lengths of service of officers who joined the military through different entry plans. Logistic regression can be used to identify the predictors of attrition. Hoglin and Barton (2013) used this technique to determine that members with a low level of education, low aptitude score, and low psychologist interview rating on enlistment are more likely to leave the Australian Defence Force in their first term.

Here again, attrition studies have a high potential for collaboration between MWFA practitioners and researchers in other domains. While MWFA focuses on numbers of releases and attrition rates, research from other disciplines helps to explain the reasons why members leave the military.

## Estimating Future Attrition

Several aspects of the personnel management system, including recruitment, training, and promotion, are driven at least in part by attrition; thus, it is important to be able to anticipate attrition in order to plan these functions. In some cases, military planners may wish to know how many members will leave the organization within the next two years, or they may be interested in how attrition will change in the long term. In other cases, they will be interested in only one subset of the population, such as a specific occupation. MWFA analysts themselves may also need to know about future attrition, since this information is often a required input for a model intended for a different purpose such as for recruitment recommendations.

Several analytics-based methods are suitable for estimating future attrition. Okazawa (2007) and Fang and Okazawa (2009) proposed a method for estimating the number of future releases by using each member’s years of service as a predictor, the rationale being that members are most likely to be released at the end of a term of service, which typically coincides with a specific number of years of service. Some practitioners have used advanced statistical methods or machine learning techniques – Diener and Calitoiu (2017) used logistic regression to predict attrition up to two years into the future; Pechacek et al. (2019) used a neural network model to calculate the probability that a member would remain in the military after a specified period of time, based on some administrative data on that member’s career; and Smith et al. (2018) used a binary logistic regression model, classification tree, and a random forest classification model to predict the probability that a member would be released prior to the completion of their first term.

It is the responsibility of the MWFA researcher to determine which method is most appropriate to answer the client’s question. Factors to be considered include the required length of the forecast (since some methods are more suitable for short-term

forecasts, while others are more suitable for long-term forecasts), the amount of historical data available for the population of interest (since simpler models are more appropriate in cases where the volume of data is limited), and the way that the information will be used (since it may not always be an efficient use of resources to devote large amounts of time to developing a forecast with a very high level of accuracy).

## Intake Planning

Intake planning, that is, the process of determining how many members need to be recruited to achieve the required number of personnel in the organization, is a crucial part of the military workforce planning cycle. The process can be very complex with many factors to be taken into account. Firstly, military organizations are faced with overall constraints. For example, in the Estonian Defence Forces, the personnel costs should not exceed one third of the defense budget (Viljar 2017). The United Kingdom Armed Forces have a target of 144,200 full-time trained personnel (Dempsey 2020), while the Regular Force of the Canadian Armed Forces is constrained to 71,500 trained and untrained personnel (Department of National Defence 2017). Secondly, within a military organization, each occupation requires a specific number of trained members, and this number can change over time. Further, there are numerous streams through which a person can join an occupation in the armed forces (e.g., subsidized education programs, direct entry, transfer from another occupation); these too are subject to change. Each stream has its own training path, with its own expected training success rate, length of training, and training capacity. At the same time, many military organizations have additional goals (e.g., for the representation rate of women) to be considered in intake planning.

MWFA practitioners have a role to play by providing direct support to military planners in quantifying the intake needs. Because of its complexity, it is not practical to model the details of the entire personnel production system; rather, simple interactive tools that allow military planners to conduct “what-if” analysis with instantly updated results are useful for this purpose.

Depending on the organization’s way of operating, such tools are useful for intake planning at different levels. At the total-force level, Straver and Pilat (2017) developed a model to determine the future intake of men and women needed to achieve the Canadian Armed Forces’ representation goal of 25.1% women, accounting for expected attrition and planned growth to the forces overall. To support planning at the occupation level, Okazawa et al. (2018) developed a model to enable military planners to determine the intake needs for occupation through various entry plans, accounting for attrition from the trained population, attrition during training, length of training, and training capacity.

Aside from a brief mention in a report from the NATO Research and Technology Organization (NATO 2012), there is scant literature on these tools. This is likely because this type of model development is less academic in nature than some other analytics-based methods used to support military workforce planning, which will be discussed later in this chapter.

## Support to Recruiting

While the previous section focused on estimating intake requirements, this section focuses on how analytics can inform recruitment strategies to meet those needs. Different nations recruit in very different ways, so there is no one-size-fits-all approach. For example, nations with all-volunteer forces will face different problems than those that use conscription. In Estonia, conscripts gain skills (e.g., communication and information technology) that they will use in civilian life (GlobalSecurity.org 2014), while all-volunteer forces struggle to recruit people with these skillsets (Straver and Arseneau 2019). Further, different nations are interested in recruiting from different segments of the population, having varying requirements for age, education, physical fitness, etc. Some nations accept women into all positions, while others have restrictions on roles for women. Factors such as unemployment rates among young people and the public's perception of the military (e.g., extent to which military service is considered a desirable occupation; perceptions regarding the role of women in the military) have an impact on the challenges that armed forces face in their recruitment efforts (Smith and Heinecken 2014). Finally, the COVID-19 pandemic has had an impact on military organizations around the world to varying extents due to the need to cease or reduce normal recruitment and/or training activities.

For all-volunteer forces in particular, artificial intelligence (e.g., machine learning) is increasingly being used to support recruiting functions, but there is potential for more to be done in this area. A comprehensive study by the RAND Corporation highlights how technological advancements in this field can be leveraged to transform outreach and prospective recruit management strategies (Lim et al. 2019). Already, studies have been conducted to identify geographic areas with high potential for quality recruits (Fulton 2016; Monaghan 2016; McDonald et al. 2017; Ueno et al. 2021) and to identify potential channels for reaching women through analysis of social media behaviors (Ueno et al. 2021).

## Modeling Force Structures and Training Systems

This section focuses on problems in the areas of force structures and training systems, which can be solved by modeling and simulation. Force structure models represent the flow of personnel through a military hierarchy, and training models represent the flow of personnel through a training system. These areas are interrelated to an extent – a military organization's ability to sustain its force structure (i.e., to fill the positions within its ranks by qualified personnel) is dependent in part on the capacity of the training system to prepare members for those ranks. For this reason, force structure models often, but not always, include a representation of the training system. Some force structure models also include elements of force employment, for example, to determine whether sufficient personnel resources will be available for deployment on operations. (As examples, see Scales et al. (2011) and Filinkov et al. (2011).) The level of detail included in different components of the model will vary depending on the problem to be solved.

Force structure models account for the attrition, promotion, and intake of personnel and, in some cases, training or force employment, as noted above. They can answer question such as:

- How many promotions will be needed to fill the ranks?
- How many new members are needed each year to sustain the force structure?
- How many years do members typically spend in each rank? How will this change if attrition rates change?
- How long will it take to transition to a new force structure?

When the focus is on training systems, typical questions include:

- What are the main bottlenecks in the training system?
- How many courses need to be run to generate the required number of trained personnel, and how might this change over time?
- How can resources (e.g., instructors, equipment) be allocated to optimize the throughput of the training system?
- If a course needs to be cancelled or delayed, what downstream effects can be anticipated?

It may be necessary to spend a considerable amount of time gathering, cleaning, and formatting the input data to be used in the model (Lesinski et al. 2011), and this is particularly true for modeling training systems. MWFA practitioners will likely need to invest a considerable amount of time in studying the existing training system and in understanding the constraints and limitations of changes that are to be considered. Okazawa (2013a) notes that typical simulation models of training systems require data on the current population undergoing training, details about courses (e.g., capacity and other resource limitations, schedule, duration, failure/withdrawal rate), and details on the ways in which trainees advance from one course to the next. Some of the necessary information is not likely to be available in a corporate database, so it is often necessary to consult subject matter experts (Okazawa 2013b). Conversely, much of the information required for force structure models (e.g., historical attrition rates, promotion criteria) will be available from corporate human resource information systems, policy documents, or other readily available sources. Of course, models that incorporate aspects of both training systems and force structures will be more complex, increasing the time and effort required in developing the model.

MWFA practitioners will need to determine the level of detail that is needed to address the research questions. When the focus is on force structures, it is usually appropriate to model training in a relatively simple way, if at all, and vice versa. Regardless of the area of focus, a high level of detail may not always be necessary and may be counterproductive. As noted in Lesinski et al. (2011), additional detail does not necessarily contribute meaningfully to the research questions; further, valid, authoritative data may not exist, and too much detail may be computationally prohibitive for larger models.

The most common modeling approaches used for these types of problems are system dynamics, discrete event simulation, and Markov chain modeling. All methods aim to represent the dynamics of the system. For example, the attrition of a member creates a vacancy; that vacancy is filled through the promotion of a qualified member from the rank below, which creates a vacancy to be filled through the promotion of a qualified member from the next rank below, and so on, until positions at the lowest rank are filled by new members (often after a period of training).

In system dynamics, a system is represented by a set of stocks (e.g., the number of members of a particular rank, or the number of members taking a specific course) and flows (e.g., the number of members advancing from one rank to the next, or the number of members moving from one course to another). Armenia et al. (2012) used this approach to inform policy decisions pertaining to the downsizing of the Italian Air Force, and Séguin (2015) used it to model the pilot occupation of the Canadian Armed Forces, assessing the impact of reduced budgets in combination with high numbers of pilots completing the initial phases of their training.

Discrete event simulation models treat each member as an individual entity as they move through the system. Each individual can be assigned numerous attributes that can change over the course of (simulated) time. For example, Serré and Gauthier (2016) used discrete event simulation to determine how long it would take for the Musician occupation in the Canadian Armed Forces to transition to a new rank structure that had undergone major changes. Lesinski et al. (2011) used it to model the flow of US Army officers from their commissioning source to their first unit of assignment. For the Royal Australian Navy, Lalbakhsh et al. (2018) used it to determine the number of members who could complete conversion training to become qualified to fly a new type of aircraft.

In Markov chain models, personnel flows are based on probabilities; for example, members of a particular rank will have a specified probability of attrition, or probability of advancement to the next rank. Zais and Zhang (2016) used a Markov chain model to study monetary incentives of stay-or-leave decisions, estimating the financial impact of staying or leaving for each stage of a member's career, taking into account the future career progression and retirement benefits versus expected pay in the civilian sector. The Canadian Armed Forces use a Markovian planning tool to enable occupation planners to determine whether long-term sustainability problems can be expected in a proposed force structure based on the occupation's attrition rates and promotion criteria (Boileau and Isbrandt 2020). Škulj et al. (2008) found that it was not possible to fully sustain the desired force structure of some segments of the Slovenian Armed Forces, which provided evidence for what experts and decision-makers were already somewhat aware of anecdotally or based on operational know-how.

While all of these approaches have been used successfully to solve workforce planning problems, they have different strengths and weaknesses, and different practitioners have different preferences. Markov chain models seem to be the least popular of the three methods discussed in this section. Although Guerry and De Feyter (2009) suggest that a Markovian force structure model is an interesting tool



for gaining insights (e.g., through what-if analysis), they acknowledge that it has some critical limitations. Wang (2005) argues that system dynamics is most suitable in cases where the effects of feedback are important to consider; while Jnitova et al. (2017) prefer the flexibility of discrete event simulation, Jajo (2015) prefers discrete event simulation for its ability to track and monitor individuals' attributes and for its suitability for modeling small populations.

Some practitioners have discussed the suitability of system dynamics versus DES approaches, both for military workforce planning problems (Jajo 2015; Jnitova et al. 2017) and in the broader field of modeling and simulation (Chahal and Eldabi 2008; Tako and Robinson 2009; Greasley 2009). It is generally accepted that system dynamics is a suitable approach for strategic-level problems where the goal is to understand the overall functioning of the system and the interactions within it, whereas discrete event simulation offers a higher level of granularity for problems at the operational level (Helal and Rabelo 2017). Hybrid models that include elements of both approaches have also been used to solve problems in this domain (Škraba et al. 2007).

## Additional Applications

The previous sections presented examples of how analytics support ongoing functions in military workforce planning. MWFA practitioners also conduct studies to answer specific questions or to support specific decisions. Some studies are descriptive in nature, while others require a bespoke model (or a variation of one of the approaches discussed above). They may be designed to help evaluate the effectiveness of a program, determine the effects of a past change to a policy or process, estimate the impact of a policy change being considered, or serve some other purpose. Some analyses may take a matter of hours for a practitioner to complete, whereas others may take a year or more. Following are a few examples of such studies:

- Diener (2017) constructed a mathematical model to determine how many bilingual members would be needed to fill the number of bilingual positions in a specified rank and occupation of the Canadian Armed Forces, taking into account the practice of rotating personnel out of positions every few years.
- Bender and Kerzner (2002) studied the long-term impact of increasing the compulsory retirement age and found that the effect on promotion rates would be minimal.
- To assist in the planning of a benefit being considered for members who suffered a career-ending injury, Okazawa et al. (2018) developed a Markov chain model to estimate the total years of service and rank that a member would likely have attained had the injury not occurred, accounting for the member's history of advancing quickly (or slowly) through the ranks.



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## Summary

This chapter presented an overview of the role that analytics plays in military workforce planning. As an applied research field, the objective is to support military leaders by giving them insights about their personnel and to support their decision-making in areas from intake planning and recruitment to the design of force structures and training systems. For this reason, with the exception of cases where relatively advanced techniques are used, it is difficult to find examples of MWFA applications in the scientific literature. In many cases, solutions in the form of graphical representations of complicated data or bespoke spreadsheet models are appropriate for answering the question at hand. While these are generally of interest to the users and practitioners within a local MWFA community, they are not generally of interest in the academic domain.

Underlying all analytics in this domain is data. Although military organizations around the world collect data about their personnel, MWFA practitioners face challenges with accessing, integrating, cleaning, and generally making sense of the data. It is hoped that some of these issues will diminish over time, with more resources being dedicated to data management and governance given military organizations' increasing interest in data-enabled decision-making. However, even if improvements can be made to data access and quality, practitioners will still need to develop a deep understanding of the data, and the organizational and policy context surrounding its collection, which can be difficult for those new to the field.

This chapter discussed a few methods commonly used in the field, ranging from descriptive statistics to machine learning to modeling and simulation. Advancements in the field of data science will provide MWFA practitioners with new ways of exploiting data on military personnel, but they should bear in mind that simple solutions and traditional approaches still provide great value. Novel tools are not “magic bullets” that obviate the need for collaborative approaches to problem-solving that include decision-makers, military planners, and subject matter experts. Making the most of the data available, the human knowledge of the problem to be solved, and an understanding of the military workforce management system is the best way to ensure that military clients receive sound advice.

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## Cross-References

- ▶ [Challenges in HRM in Military Organizations](#)
- ▶ [Economics, Logistics, and \(Human Resources\) Management in Military Sciences](#)
- ▶ [Military Personnel](#)
- ▶ [What is Military Behavioural Sciences?](#)

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# Sociology of the Military

Delphine Resteigne

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## Abstract

Military sociology, or more precisely, the sociology of military organizations, studies social facts about military institutions, their functional and structural components, and their relations with the societies that constitute their environments. Three periods can be roughly distinguished in the historical development of military sociology: the origins of the discipline, the Cold War period, and the current one. Like other subfields of sociology, the themes discussed in military sociology reflect the evolution of society at large. This particular branch of sociology bridges individual behaviors with broader social structures, in this case, military organizations.

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D. Resteigne (✉)

Chair of Sociology, Royal Military Academy, Brussels, Belgium

e-mail: [delphine.resteigne@mil.be](mailto:delphine.resteigne@mil.be)

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Military institutions · Professionalization · Diversity and inclusion

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**Origins of the Discipline**

Simply put, sociology can be simply defined as the scientific study of human life or the study of social institutions brought into being by the industrial transformation of the past two or three centuries. Military sociology is the particular sociology which aims at the study of military facts, that is, facts relating to the military institution, its functional and structural components and its relations with the society. Military sociology is thus the branch of the sociology that focuses more narrowly on individuals within the military institution and the wider society. At the creation of sociology as a discipline in the nineteenth century, military facts and military power were already the subject of study – or at least subject to some consideration – by sociology’s founders, like Max Weber in his examination of the concept of bureaucracy, Emile Durkheim while studying mechanical solidarity in small groups, and Georg Simmel examining the various motives behind conflicts (see Soeters, 2018). But the first really scientific research on military facts did not really begin until the First World War. These studies, carried out in the United States, were mainly undertaken by psychologists and dealt with recruitment (Martin, 1981). The aim was to develop psycho-technical tests to improve personnel selection. Between the two world wars, research in military social sciences stopped progressing and relations between the armed forces and the university became strained.

The Second World War gave rise to a major mobilization of scientists, including social scientists. Problems arose which could not be solved by the old methods, such as motivating troops, adapting recruits to their new environment, the cohesion and efficiency of combat units and groups, officer-troop relations, race relations, morale, combat behavior, and the development of a new culture of warfare. Social scientists were divided into two major groups, the US Army Research Branch and the Psychological Warfare Board. The findings of the US Army Research Branch appeared in Stouffer et al. (1949). Research by the Psychological Warfare Board was partially published by Shils and Janowitz (1948). In the 1950s, research focused on the field of civil-military relations (chapters “Civil-Military Relations: What Is the State of the Field?” and “Dynamic intersection of Military and Society”) and, in particular, the influence of the military in society.

In sum, military sociology remained an underdeveloped field until the late 1950s. Works devoted to it tended to approach military matters as a category of distinct phenomena, and emphasis was placed on military specificities (rigidity of stratifications and authority relations, behavioral traditionalism, ritualism, formalism, value systems, etc.).



## **Military Sociology During the Cold War**

Morris Janowitz can be considered the founder of modern military sociology, and this in two ways. First, from a scientific standpoint, his contribution remains unparalleled, so much so that military sociology is still largely dominated by the Janowitzian model. Second, at the institutional level, he founded the first association of military sociology (the Inter-University Seminar on Armed Forces and Society) and helped make it a discipline recognized by the scientific community. In order to institutionalize this new field of research, the Research Committee 01 was also established within the International Sociological Association. The first meeting of what became the Research Committee took place at a conference on armed forces held in London in July 1964 at which Janowitz served as the convener and chairman. The purpose of the meeting was to provide an international exploration of the comparative sociology of military institutions. Research Committee 01 was initially established by the International Sociological Association in 1970 with the title Armed Forces and Society. In 1980, reflecting a broadening of its orientation, the committee was renamed Armed Forces and Conflict Resolution.

Janowitz's book, *The Professional Soldier* (1971), initiated the development of research in military sociology. First published in 1960, it was devoted to the American officer corps. The book was original in approaching, for the first time, the military organization as a bureaucratic open system (Downs, 1967). It showed that military organizations were not static but adjusted their structures to changes in their environment. The central thesis of the book was the increasing convergence between military and civilian organizations. Janowitz called this convergence the civilianization of military institutions, which meant that military institutions were losing their martial specificity and, consequently, coming to resemble civilian institutions more and more. During the Cold War, American researchers dominated military sociology, though Janowitz inspired a few European sociologists (among them Van Doorn and Gwynn Harries-Jenkins) to conduct research on European militaries. The main topics dealt with the decline of the mass armed forces and the end of the draft, the greater convergence between military and civilian organizations, and the evolution of the military profession. These topics are discussed in the next three sections.

### **Decline of the Mass Armed Forces**

Since military organizations were described by Janowitz (among others) as open systems, it has been found that different forms of society have different types military organization. The era of the mass army began with the American and French revolutionary wars and ended shortly after the Second World War. According to Van Doorn (1975), the word *mass* in *mass armies* had three meanings. The first referred to their size in comparison with previous armies. The second referred to the degree of social mobilization necessary to maintain the system: Mass armies required broad military participation of citizens in peacetime (in the form of military service) and on

the mobilization of all the forces of the nation during war. Finally, the third and most important meaning referred to the degree of organizational homogeneity of these armies: Mass armies had relatively little social differentiation. They were composed of a small number of professional soldiers supervising a large number of conscripts to which was added, in times of war, an enormous number of mobilized citizens. The functional differentiation was very low and of a specifically military nature (i.e., combat duties). In other words, while the military institution was relatively homogeneous, it was also strongly differentiated from civil society.

The transformation of military organizations that began after the Second World War was characterized by a decline in the model of the mass armies. Broadly speaking, the transformation mirrored one taking place in all complex organizations in post-industrial societies, namely, the transition from labor-intensive organizations to a capital-intensive organizations that used machines. Militaries gradually moved from a model of universal conscription in peacetime and mobilization in times of crisis to a *force-in-being* model. With the advent of nuclear weapons, moreover, deterrence replaced total war as the dominant strategy. In order to function effectively, deterrence required a military organization immediately and constantly operational, one that regularly incorporated technological innovations – changes that were incompatible with the principle of mobilization central to the mass army system. Janowitz (1971) describes *forces-in-being* as military organizations composed largely of professionals who are self-sufficient in achieving their objectives without prior mobilization and are in a permanent state of availability and alert. Such militaries had to be structurally and functionally highly differentiated and had to use sophisticated technology. They were significantly smaller than mass armies and strictly military functions were mostly supplanted by technical, logistical, and administrative tasks performed by specialists. In other words, these organizations developed a professional structure much like civilian bureaucracies.

## **Civilianization of the Armed Forces**

As the term suggests, *civilianization* refers to military organizations gradually becoming more like civilian organizations (Manigart, 1985). Before the twentieth century, the boundary between the military and its surrounding society was easy to draw: The workforce was made up almost exclusively of military personnel and the division of labor was extremely simple, with few rigidly defined hierarchical levels. As previously mentioned, functions were few and oriented to combat. In the twentieth century, however, the combined effect of technological and sociocultural change made militaries more heterogeneous, both in terms of the division of labor and in social terms. The military-civilian boundary has become blurred and more permeable, the military being no longer limited to combat functions, and a significant number of civilians being employed in the armed forces. Moreover, the motivations of military personnel have changed as different roles have been added. This diversity of interests, coupled with greater social heterogeneity, meant that the

traditional *esprit de corps* – the sense of solidarity among the members of the organization – became weaker.

The convergence between civilian and military organization, however, cannot lead to the total elimination of differences between military and civilian institutions. According to Janowitz and Little (1974), three combat-related functions limit this tendency and distinguish military institutions from civilian organizations. First, the military remains a dangerous occupation and the risk is inherent to military service. Second, while combat is now only a small part of the tasks of forces-in-being, it remains its ultimate function and justification. Third, as long as imponderable factors continue to play a role in determining the outcome of a conflict, and as long as the combatant's spirit is required to fight the battle, the military will tend to reject the civilian model.

## Two Models of Political-Military Relations

Huntington's (1957) model of military professionalism is based on a traditional understanding of political-military relations in democratic societies. For Huntington, the term *profession* is limited to the officer corps and has three characteristics: competence (expertise), corporate or community sense, and responsibility. The officer's sphere of competence is the management of violence, and the spheres of competence of the military and political elites are discrete: The officer is not involved in political decision making; instead, the professional officer is a politically neutral tool in the hands of the state. Huntington recognizes that the professionalization of the officer corps depends on civil society being pro-military and conservative – a mentality he calls "conservative realism."

Unlike Huntington's model, Janowitz's (1971) model is based on an empirical analysis of the military profession and political-military relations in industrialized countries. For Janowitz, the technological developments that have led to the civilianization of military organizations have made the traditional democratic model obsolete because it depends on a strict differentiation between political and military functions (even if the civilianization process does not in itself change the constitutional subordination of the military to the government). Janowitz therefore rejects Huntington's definition of the military's area of competence as too narrow; the professional soldier is not only a specialist in the management of violence but must also be aware of the political and economic implications of the use of military force. Thus, Janowitz proposes a model of political-military relations where the professional military is not necessarily indifferent to political affairs and, more importantly, where its sphere of competence is no longer exclusively military. Allowing the military a monopoly on military competence, as Huntington suggests, would not minimize the power of the military but increase it. In order to maximize civilian control, the military institution must be civilianized, not militarized. By this Janowitz means that the professional military must adopt civilian values and norms – that is, the military institution must be as socially and ideologically representative of the parent society as possible. In short, where Huntington proposes an autonomous

and politically neutral military profession, Janowitz proposes that the military be integrated into society, aware of the political impact of its actions and respectful of civilian power.

## **Military Profession and the Institution-Occupation Model**

The Vietnam War led to the emergence of anti-war movements and, in the academic realm, to more critical military studies. From the 1970s onward, a market-based model of the military – originally proposed by American economists such as Milton Friedman (1967) – progressively replaced the draft system. The draft system was first abolished in 1973 in the United States, and this “human resources revolution” was then followed by most other Western countries. The draft system was considered inequitable, burdening mostly working-class youth and youth of color but also coercing conscience and violating personal liberty (Rech, 2014). With no permanent mobilization, the introduction of an all-volunteer force has posed new challenges to military institutions. With regard to the citizen army, the “market army” was primarily based on material instead of symbolic rewards and led to the rise of a commodified army (Soeters, 2018, p. 46). As a result, the military profession has been less and less seen as a calling or vocation and more and more as an occupation like any other. *With the marketization of the military profession, researchers began to look at the motivation of new recruits and how the military can remain competitive in the labor market.*

*One of the most famous typologies conceptualizing this evolution was the one proposed by Moskos.* In his seminal article, “From Institution to Occupation: Trends in Military Organization,” Moskos (1977) distinguished two ideal conceptions of military organizations, an institutional (or traditional) conception, corresponding to mass armies, and an occupational (or instrumental) conception, corresponding to the forces-in-being. Following the decline of mass armies, he argued, military organizations in industrialized countries had gradually moved away from institutional attachments to instrumental ones. In the institutional conception, military personnel are motivated by a calling, by feelings of sacrifice, dedication, and patriotism. They see themselves as different from others, as having an activity of their own. Generally speaking, an institution is legitimized by its values and norms, or, more precisely, by goals that transcend individual interests in favor of a higher general interest. In the occupational conception, however, the military profession is just a job. Members are driven by self-interest and enlist for essentially economic reasons – entering the military is just a way to make a living. It is no longer an end in itself, a source of intrinsic rewards, but rather a means of acquiring extrinsic rewards. As a result, supply and demand, rather than normative considerations, determine the level of remuneration, and the priority is given to the individual rather than to the organization and the common good. Moskos called this shift from the institutional to the occupational model the secularization of military expectations and attributed it to the combined effect of technological and sociocultural factors (especially individualism), factors that were visible across Western societies (also see chapter “Military

Profession”). Weber had earlier described these changes as “the disenchantment of the world,” where traditional and value-rational actions had given way to instrumental rationality, guided by self-interest (Soeters, 2018).

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## Current Trends in Military Sociology

It is evidently impossible to analyze in this contribution all the recent trends which occurred during the last decennia in the realm of military sociology. In this section, we depict several topics that are prominent issues at the core of the current debates in this particular field. The end of the Cold War, combined with technological innovations generated by the third industrial revolution and the globalization of the economy, have led to major changes in military organizations, which researchers such as Snow (1991) and Toffler and Toffler (1993) have called a “revolution in military affairs.” This revolution is a result of precise long-range, joint-strike capabilities and a set of information capabilities that allow for real-time collection and processing of information on a global scale. Long-range capabilities have blurred the distinction between “warriors” and “non-warriors.” We have also moved from an environment dominated by binary logic (friend vs. enemy) to an environment based on multivalent, blurred or, with a term borrowed from cybernetics, a “fuzzy logic of “friend/foe/non foe.” In tone with the multitoned tendency of the multipolar world, this logic is based on the plurality rather than the binarity of actors involved in current conflicts. This fuzzy logic has thus replaced the closed alternative 1/0 (friendly/hostile) with the open alternative 1/0/–1 (Battistelli et al., 1999).

In light of the revolution in military affairs, we have seen the increased globalization of military sociology notably through cross-national publications in journals like *Armed Forces and Society* (Sookermany, 2017) and a gradual development of comparative research through international scientific associations like the European Research Group on Military and Society (ERGOMAS). This association was originally based in Europe but has since attracted researchers from around the world. ERGOMAS was founded in 1986 and includes the following working groups: Morale, Cohesion and Leadership, Public Opinion, Mass Media and the Military, Gender and the Military, Military Profession, Civilian Control of the Military, Warriors in Peacekeeping, Military Families, Recruitment and Retention, Military and Police Relations, Violence and the Military, Veterans & Society, Military Conflict Management and Peace Economics, Critical Military Studies, Total Defence Force.

Much research over the last decade has focused on the changing environment and the blurring of boundaries between military organizations and other actors but also on the increasing participation of military personnel in culturally complex operations. As Soeters (2018) remarks, military sociologists have rarely directly studied military action in operational theatres, which remains difficult for security reasons. This is also why much of the sociological research conducted in military organizations is done by sociologists working in defense ministries. Over the last decade, however, we have seen academic work conducted in operations that looks at the

changing nature of missions, tactics, and cohesion, especially in the major campaigns in Afghanistan and in Iraq. Several authors have tried to analyze various concepts (e.g., cohesion, leadership, decision-making processes) in those twenty-first century interventions. In addition, a growing number of sociologists – mainly insiders working in military institutions – have analyzed the dynamics of military operations through fieldwork in recent military operations like Iraq (Ender, 2009), Afghanistan (King, 2011, 2019; Resteigne, 2012), and Lebanon (Resteigne, 2012; Ruffa, 2014).

The recent research led to a major publication in military sociology, the *Handbook of Sociology of the Military*, which was edited by Caforio in 2003, with a second and updated edition of the volume published 2018. This volume brought together significant works structured around five topics: theoretical and methodological orientations, armed forces and society, inside the military, trends in the military: conversion and restructuring, and, lastly, a special emphasis on the new missions conducted in the first decade of the new millennium. In the following sections, we discuss some of the major developments in these fields of research.

## **New Wars, Post-Modern Military, and Constabulary Forces**

The post-Cold War geostrategic environment has been characterized by greater complexity and uncertainty when compared with the bipolar world of previous decades (chapters “Military Operations” and “Operations in Irregular Warfare”). Kaldor (1999) uses new wars and old wars as rubrics for marking the changes. Where old wars were fought for geopolitical or ideological objectives, new wars are fought for more particular or identity-based political objectives, using tactics of terror and destabilization, which are, in theory, prohibited by the laws of war. In the current framework, military organizations have been labeled as postmodern (Sookermary, 2015). As initially developed by Inglehart (1999), post-modernization brings a shift away from both traditional and state authority. Moskos and Burk (1994) have summarized, under the form of contrasts, the main differences between what they call early modern (mass armies), late modern (forces-in-being), and postmodern military organizations (Table 1).

The main missions of post-modern military organizations are to combat these new intra-state threats and to maintain or restore peace in regions where our interests are at stake and for humanitarian reasons. This change in the role and missions of postmodern military organizations had been anticipated by Janowitz in the early 1970s. In *Professional Soldier* (1971), Janowitz foresaw Western militaries functioning as a constabulary force – like an international police force. According to his definition (Janowitz, 1971, p. 418), a constabulary force is immediately operational and uses a minimum of violence; its aim is not (national) victory, but the restoration or establishment of stable international relations. What is new with these so-called postmodern armies (Moskos & Burk, 1994), however, is homeland operations. Concretely, at present, these missions cover conventional combat, counterinsurgency, peacekeeping, or peace enforcement in unstable regions of the world, but

**Table 1** Evolutions and trends among military organizations

Variables	Early modern (Pre-Cold War)	Modern (Cold War)	Postmodern (Post-Cold War)
<b>Perceived threat</b>	Enemy invasion	Nuclear War	Subnational and non-military
<b>Force structure</b>	Mass army	Large professional army	Smaller professional army with reserve sharing missions
<b>Public attitude toward military</b>	Supportive	Ambivalent	Skeptical or apathetic
<b>Impact on defense budget</b>	Positive	Neutral	Negative
<b>Dominant military professional</b>	Combat leader	Manager or technician	Soldier-statesman, soldier-scholar
<b>Civilian employees</b>	Minor component	Medium component	Major component

Adapted from Moskos and Burk (1994, p. 197)

also fight against international terrorism abroad and, more recently, within national borders (Resteigne, 2021). One of the implications of the development of such a posture is that the military must be able to modulate the intensity of its use of force within a very short period of time, which requires a high level of professionalism and an extensive period of training.

In the mass armies of the nineteenth–twentieth century, the image one had of the military professional was that of a heroic fighter. After the Second World War, this image evolved as a result of technological change. Two new professional models appeared: the soldier-technician and the soldier-manager (Janowitz, 1971). Effective performance of the officer's task in the postmodern period with its new missions, most of them in a multinational framework, requires additional skills and capacities (*soldier-scholar*). Military personnel are indeed more and more entrusted with extramilitary tasks of a political nature (*soldier-statesman*). Regarding the structure of the force, *post-modern military organizations have become smaller organizations but with permeable boundaries with the whole society, notably with regard to the use of the reserve force and other external actors (outsourcing and insourcing). Despite the post-modern shift of the population and a more skeptical or apathetic attitude toward the military, post-modern organizations, as we will see in the following point, should remain socially integrated in their societies, notably for recruitment, legitimacy, and operational imperatives.*

## Recruitment and Diversifying the Military Organization

In the era of globalization, military organizations are bound to become more diverse internally and externally. Internal recruitment remains challenging because military employment is considered dangerous and relatively unprestigious; thus, volunteer armies find it increasingly difficult to attract enough people in their ranks. Given the



post-9/11 conflicts, the recent terrorist attacks in Western Europe, and recent Russian aggression, some countries (like Sweden) have reintroduced draft systems. With the revival of the draft, we can no longer make a binary distinction between conscription and all-volunteer forces; it has become a matter of degree between different levels of vocationalization. Special attention should be given to how the different level of vocationalization of the armed forces affect power structures in society and the political supervision of the military (Levy, 2015). In order to fill their ranks, military organizations also reach out to new segments of the population and try to make themselves more attractive to certain categories of the population that they had neglected until now. Postmodern organizations also try to be more culturally diverse for pragmatic reasons (recruitment) and to improve their image and maintain their legitimacy. Traditionally, the legitimacy of mass armies came, in part, from reflecting the social composition of their respective nation-states. Postmodern military organizations need to increase their cultural diversity to include all social groups. The emphasis is more on cooperation than before, and most military operations are now undertaken by multinational forces (Resteigne, 2012). The developments mirror those in the civilian sector, namely, the proliferation of joint ventures, strategic alliances, and other virtual organizations. In order to function effectively, there is a growing need for intercultural competences and for training the workforce to nontraditional military tasks and duties of a political nature (e.g., relations with local authorities, with the local population, with other contingents).

A growing number of academics have studied how diversity affects traditionally homogeneous military organizations. Ethnicity and race dynamics were particularly studied in the United States where the share of racial and ethnic minorities has grown in recent decades and composes almost half of the global workforce today. As highlighted by Shields (chapter “Dynamic Intersection of Military and Society”), the military is shaped by the culture and belief systems of society and mirrors practices of the larger culture which sometimes leads to policies of exclusion or marginalization. On the gender side, even if the role of women in the armed forces has a long history, the feminization of the military is still studied among conventional forces (chapter “Women in the Military: Changing in Representation and Experiences”; Nuciari, 2003; Winslow, 2010) and, more recently, among special operations forces (Rones, 2017). Three years after publishing *The Combat Soldier*, King (2016) also analyzed the changing nature of combat roles, notably through the accession of women, in his article “The Female Combat Soldier.” Based on his extensive work on operations in Iraq and Afghanistan, he showed how female soldiers remain stigmatized with culturally denigrated codes in military organizations. Even if there are a growing number of women who become military leaders, the masculine domination (Bourdieu, 1998) remains persistent through routines, bias, stereotypes, and what has been called “naturally expected” attitudes and behaviors. Many obstacles and basic assumptions related to the military culture and the masculine warrior paradigm (Dunivin, 1994) still prevent military organizations from becoming fully inclusive workplaces. Although changes have been observed at the legal and organizational level, some deep-rooted elements of this



masculine domination remain persistent in the mentality of military personnel, both among men and women (Resteigne, 2015).

## Professionalism and the Changing Nature of Cohesion

With smaller workforces operating in culturally complex environments, military organizations have been pushed to evolve. This was underlined by Moskos and Burk in the 1990s when they described the postmodern military (1994) and the soldier-scholars and soldier-statesmen required by it. Soldier-scholars were post-modern officers expected to master the complexity of new missions and their environment and to follow a more advanced academic training, and by soldier-statesmen, that the postmodern officers are skilled in handling the media and adept in the intricacies of international diplomacy. Observing these profound occupational changes, several researchers have reassessed the meaning of professionalism in small and professional military organizations. In most contemporary service occupations, professionalism is being constructed and imposed by the majority through a top-down process. The ideals of dedicated service, autonomous decision making, and occupational control of work are part of the appeal of the discourse of professionalism (Evetts, 2003). The concept of professionalism is also very often used as a promotional motto to attract new recruits (e.g., the quiet professionals referring to the Special Forces).

Several studies have looked at the effect of group cohesion on performance and the level of professionalism in a group. Classic studies, particularly that of Shils and Janowitz (1948) on the cohesion and disintegration of the Wehrmacht during the Second World War, showed that cohesion and morale among combat troops was based on the existence and development of primary groups within basic military formations. As long as the primary relationships within sections and platoons were maintained, and as long as the basic needs of the group were met, the units functioned satisfactorily. Nowadays, social cohesion still plays a fundamental role in military groups, but the existence of primary groups is not sufficient in itself to ensure the proper functioning of military units. Burk (1999, p. 447) defined cohesion as the emotional bonds of camaraderie, of shared identity among soldiers in a small group. MacCoun (1993, p. 291) drew a conceptual distinction between social cohesion and task cohesion. Social cohesion underlies the emotional bonds of friendship, liking, caring, and closeness among group members, while task cohesion refers to the shared commitment among members to achieving a goal that requires the collective efforts of the group. Members of a group with high task cohesion share a common goal and are motivated to coordinate their efforts as a team to achieve their goal. A related distinction is the one between horizontal and vertical cohesion. *Task cohesion and social cohesion both refer to the group level and to horizontal cohesion, while vertical cohesion refers to downward or upward cohesion (between leaders and followers).* In his book *The Combat Soldier* (2013), King analyzed how small groups of professional soldiers perform in the battlefield today and develop new forms of cohesion. He showed that unit cohesion is influenced by a variety of

factors. In particular, he argued that, despite the greater heterogeneity among units and shorter rotations, cohesion can be generated through professionalism based on drills and intensive training, instead of the comradeship characteristic of the “bands of brothers” experience in the Second World War.

## Managerial Work, Leadership, and Command

Military sociology might be the sociology of one specific type of organization, but the military is unlike any other organization. As Soeters (2000) put it, the military is a Janusian organization: One face deals with peacetime conditions, making it resemble an ordinary organization, and the other deals with crises and military operations. For this reason, researchers see the armed forces as unique organizations that require particular leadership skills (chapter “Military Leadership”). In their case studies conducted at Kabul airport, Resteigne and Soeters (2009) observed how managerial roles can be exerted with different emphases, depending on the hierarchical level, the functional area, and the specific working environment. Based on Mintzberg’s model, they showed that military managers are not merely engaged in planning and thinking but spend relatively little time thinking about what they have to do and how to do it. Managers predominantly act according to their intuition, their “gut feeling,” so managers are not confined to traditional managerial roles: the *informational* roles which link all the work together, the *interpersonal* roles which ensure that information is transmitted and the *decisional* roles which require the use of information to take the “good decisions.” As a result of changes in their operating environment, military organizations have had to redefine traditional concepts about what makes a successful manager or leader. The leadership challenges in today’s military organizations are daunting, both during peacetime training and on operations. The most successful military leaders today seem to engage in participatory leadership (King, 2019). Such leaders focus on empowering their subordinates, and they are also able to relate to their foreign counterparts and to local populations. In his most recent book *Command* (2019), based on interviews conducted with leading generals, King shows the complexity of military decision making and the transformation of military command. In the previous century, generals monopolized decision making. Nowadays, the concept of collective command has emerged to capture the increasingly complex and distributed decision-making process. Further, King (2019, pp. 156–157, Resteigne & Van den Bogaert, 2020) describes how leadership since the end of the Cold War changed from providing “combat motivation” to “providing a lasting sense of purpose” and “the ability to motivate its workforce to stay with the organization.” *The importance of decision-making communities and distributed forms of authority are not only visible in the military but also in most large organizations, which have to manage diverse and complex activities.*

## Conclusion

Military sociology was influential in the 1950s and 1960s. While it later waned, the last couple of decades have seen the discipline reemerge in prominence as a growing number of researchers have collected empirical data on operations. Several sociologists have also tried to develop theoretical insights to improve the current knowledge of armed forces in their changing societal contexts and to connect military sociology with other sociological domains. In *Sociology and Military Studies: Classical and Current Foundations*, Soeters (2018) highlighted the connections between the founders of sociology and the contemporary challenges facing military organizations. New insights have thus been provided not only to help military organizations to perform in a complex and challenging environment but also to increase the profile of military sociology among the broader sociological field. As we have seen, military sociologists have analyzed the processes that shape military life, but this task is sometimes limited by their status as insiders. With the declining public interest in military affairs, military sociologists can offer an important contribution not only to understanding how military organizations are organized around power structures, groups, and individuals but also how to maintain a relationship with the broader society.

## Further Reading

Major Military Sociology Organizations

European Research group on Military and Society (ERGOMAS). <https://www.ergomas.ch/>

Research Committee Armed Forces and Conflict Resolution (RC01). <https://www.isa-sociology.org/en/research-networks/research-committees/rc01-armed-forces-and-conflict-resolution/>

Inter-University Seminar on Armed Forces and Society. <https://www.iusafs.org/>

See Also the Following Journals

Armed Forces and Society. <https://journals.sagepub.com/home/afs>

Revue Européenne d'Etudes Militaires (Res Militaris). <http://resmilitaris.net/>

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# “New” Military History

Jan Hoffenaar

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## Abstract

This chapter provides an overview of the development of “New military history,” a general term for the broadening – in subject, approaches and methods – of the traditional, narrow operational military historiography. It first deals with the influence of the social, cultural, gender, and global “turns” in general historiography on military historiography. Next, the benefits and possibilities of these new perspectives in military historiography are analyzed, followed by the risks and potential dangers. Finally, the question of what the core of military history should be is discussed and an attempt is made to describe a “comprehensive approach” to analyze military action taken in the past, with a multifaceted “plan of attack” with several possible “axes of attack.” “New” military historians who use a comprehensive approach are best placed to explain how the course of military action has influenced the general course of history and thereby can make a full-fledged contribution to general historiography. This unique quality also gives them the ability and the right to participate in or even initiate broader academic debates.

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J. Hoffenaar (✉)

Netherlands Institute of Military History (MOD), The Hague, Netherlands

University of Utrecht, Utrecht, Netherlands

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Military history · New military history · Military historiography · War and society · Military revolution · Imperialism · Comprehensive approach · Clausewitz

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**Introduction**

For over 60 years, “new military history” has been a frequently used name for a very varied school of thought in military historiography. The paradox between the name and the length of time that it has been in existence renders its use rather awkward now. Moreover, since the term’s introduction, there has never been any consensus on what it actually means (Paret 1991, p.10; Bourke 2006, p.258). At the time, the “new” referred in general to a broadening of narrow, traditional operational military historiography. New perspectives, methods, and areas of study – initially borrowed mainly from the social sciences – emerged, all of them under the umbrella of new military history. This element of modernizing and broadening – incidentally, a development in the practice of history in general – has been a constant in academic military historiography ever since.

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**Emergence and Development**

The 1960s was a period of tremendous growth for social sciences. This growth was linked to the wave of social criticism that engulfed the world and the influx of students from increasingly larger parts of the population who critically questioned the functioning of state and society. Although military history remained suspect in academic circles (see Introduction), new approaches laid the foundation for a cautious acceptance. Social scientists in particular shifted the focus from the study of military action itself and the drawing of operational and tactical lessons from that study to the impact of wars on society and vice versa. War and society became a distinct subdiscipline. It was only in the 1980s, however, that this subdiscipline really gained momentum. The first journals in the field, such as the *War & Society* journal managed by the University of New South Wales, were published during that time. The acclaimed *Fontana History of European War and Society*, a five-volume series under the editorship of Geoffrey Best, who also wrote the first volume, was likewise published in the 1980s (Best 1982). Another important journal in this regard was *Militärgeschichtliche Mitteilungen* (since 2000 *Militärgeschichtliches Zeitschrift*), published by the Militärgeschichtliches Forschungsamt (since 2013 Zentrum für Militärgeschichte und Sozialwissenschaften der Bundeswehr). A tremendous number of subjects were placed and studied under the war and society umbrella. These subjects ranged from the social origins of soldiers to the development of their social status, from the army as the “school of the nation” to the relationship between the political and military leadership, and from the armed forces

as a bureaucratic, professional, or "learning" organization to the armed forces as an instrument for the social disciplining of conscripts from all layers of society. In this context, (the debate on) the concept of "total war" should also be mentioned (Chickering and Förster 1997–2005).

Besides the relationship between society and the armed forces, the experiences of individual soldiers in circumstances of war became an area of study. Instead of being mere pawns in a political game of chess and numbers in battles led by "great" generals, these individuals were now the main actors. The biggest breakthrough in this genre was the publication of John Keegan's *The Face of Battle* in 1976 (Keegan 1976). Using personal documents, Keegan managed to bring the frequently miserable existences of soldiers at the battles of Agincourt (1415), Waterloo (1815), and the Somme (1916) to life. Moreover, by studying combat from this new perspective, he debunked a few generally accepted assumptions about tactics. Readers of this book never again viewed war as a clash with heroic aspects. Keegan showed that it was mainly individual self-respect and group cohesion rather than discipline and courage that kept soldiers going. He also showed that war is above all chaotic and brutal. This image of the hard reality of war was confirmed by another striking work, namely an analysis of the literary processing of the raw experiences in the trenches of the First World War by cultural and literary historian Paul Fussell, which had been published a year earlier (Fussell 1975).

The "social turn" in military historiography, as the approaches described above are often referred to, was the most noticeable change. At the same time, however, financial and economic as well as logistical aspects of warfare received greater attention. A fine example in this regard is a work by John Brewer. In this work, the author convincingly shows that England's/Great Britain's rise to world power status in the eighteenth century was based above all on the state's ability to tax the wealth of its people in order to wage wars (Brewer 1988). The country had been preceded in this respect by the Dutch Republic. Unique forms of public-private partnerships had made it possible for the small, highly decentralized republic to maintain both a strong fleet and a large army in the seventeenth century (Van Nimwegen 2010; Groen et al. 2019). The tenor of this approach was that while leadership and execution were of tremendous importance in land battles, sea battles, and sieges, they could only be understood in their financial and economic and organizational contexts.

The broadening of the field subsequently continued with new turns. One of the most important is the "cultural turn," which came into vogue in the 1990s. The main idea behind this approach was that the way in which states and groups wage war is largely determined by culture (Keegan 1993, p.12). A groundbreaking but controversial study is *The Western Way of War* by Victor Davis Hanson (Hanson 1989; also Hanson 2001). Hanson concluded that the classical Greek way of fighting with infantry in phalanx formations arose from an implicit agreement between the Greek city-states that eye-to-eye combat between units in close order was the way that conflicts should be decided. In Hanson's view, the Greeks thereby laid the foundation for a "Western way of war" characterized by direct confrontations between disciplined units and supported by politico-military systems based on citizenship.



Hanson's thesis was echoed by Keegan, among others, but others described her as too rigid. John Lynn, for example, in his important cultural-military study *Battle: A History of Combat and Culture*, accuses him of replacing one general notion – that of “an all-encompassing soldier” – with the other – that of “a universal and eternal Western soldier.” The influence of culture on armed forces and their actions is, according to him, much more complex and differs per location and time. He makes a distinction between social, military, and strategic cultural influences (Lynn 2003). The field of (military) strategic cultures – how wars were fought – partly overlaps the study of the evolution of military (theoretical) thinking – how wars should be thought –, with Azar Gat as one of the most authoritative authors (Gat 2001).

Another, rather arbitrary example of how culturally determined military action can be is provided by John Dower in his study of the Pacific War (1942–1945). According to Dower, this war was as terrible as it was because both sides interpreted it as being a race war (Dower 1986). A general note in this connection is that what at first glance may sometimes appear to us as being irrational was not necessarily so if one takes account of the religious precepts and cultural conventions of the period in question. Interest in the cultural dimension of military action, also of the past, increased drastically following the end of the Cold War, when Western armed forces increasingly operated in environments that were completely different from their home environment.

Other turns in general historiography that resulted in new questions in military historiography were the “gender turn” and the “global turn.” The gender turn focuses on how culturally determined and socially constructed gender definitions, roles, and restrictions in a society affected the organization and conduct of its armed forces. For example, John Lynn refers to an “aristocratic masculinity” in the France of Louis XIV that required officers to achieve as much *gloire* as possible by exhibiting great personal courage in combat in a way that was visible to everyone present. They were therefore prepared to pay for their positions and spend considerable amounts of money on the creation and maintenance of their companies and regiments (Lynn 1997). The studies that focus on gender and analyses oriented toward cultural influences are indebted to cultural anthropology, with its emphasis on, among other things, the meaning of symbols and rites of passage.

The global turn in military historiography is a relatively recent one. It is mainly the result of rapid globalization. World history degree programs, which emerged in the last two decades of the twentieth century on the back of criticism of narrow Eurocentric and national approaches, are now “booming business” at universities. While the military dimension often occupies a very modest place in these programs, a few military historians are advocating a global, comparative perspective with respect to their field as well. The best known is Jeremy Black in *Rethinking Military History* (Black 2004). His argument is in keeping with an urgent need that armed forces have had since the end of the Cold War. Military units are deployed all over the world against adversaries who often have entirely different standards, strategies and tactics. As a result, there are currently heated debates about the content of key concepts such as “war” (not only by military personnel using military means but also by, for example, non-military actors using cyber capabilities; not only by states but

also by various non-state actors) (Kaldor 2012), "victory" (not only defeating a military enemy but also achieving positive results like good governance, rule of law, and other such results; "success" is therefore a better term) (Landmeter 2018a), and "threat" (the term "risks" tends to be used now). A "global approach" to military history makes it possible to put a given actor's military action into greater perspective.

If we consider that more turns are emerging in military historiography, such as the "emotional" and the "environmental" turns, and that the "linguistic" and "commemorative" turns are also often included in this context (but have been allocated a separate chapter here), it is, on the whole, not surprising that the term new military history can only be described in very general terms and it therefore, also because of the term's age, does not as yet mean very much in itself. With old-fashioned, limited "drum and trumpet" historiography as the reference point, it encompasses the ongoing broadening of the subject, the approaches, and the methods of military historiography.

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## Gains and Possibilities

The various "new" perspectives in military historiography have tremendously enhanced our understanding of military action in the past and present. By asking new questions, we have gained greater insight into the how, the why, the whereby, and the effects of this action. We have established links between the societies, politics, cultures, and economies of countries and the avenues open to them to wage war. We have become more aware of the stimuli and social and psychological motives of individual soldiers to do in military conflicts that which they would absolutely not be allowed to do as civilians in peacetime, namely use force and kill fellow human beings (Bourke 1999). We understand more fully that the "Western" way of warfare, based on tight discipline and technological advantage and often conducted for the purpose of destroying the adversary, was and is also very much a product of a particular culture and time.

Because of the adoption of much broader perspectives with respect to military action, military historiography has moved somewhat closer to general historiography. An important impetus in this regard was the publication of Geoffrey Parker's book *The Military Revolution* in 1988, that built on ideas that had been introduced by Michael Roberts in the middle of the 1950s (Parker 1988; Roberts 1955). According to Parker, the introduction of the cannon at the end of the fifteenth century initiated a development that would have tremendous consequences in terms of the international balance of power. The cannon were much too powerful for medieval fortifications. In response and in a relatively short time, Italian engineers designed an entirely new, geometric fortification concept with earthen walls that was able to withstand cannonades. This *trace italienne* was rapidly imitated elsewhere in Europe. After the balance between offence and defense had thus been restored, a race started to ensure that one or the other would again predominate. This resulted in an increase in the number of cannon and an improvement in their firepower and range, which in turn

required the strengthening of fortifications. The development required increasingly larger armies, which in turn required better organization. In general, this was made possible by increasing the state apparatus. Moreover, Parker established a link between this political and military strengthening of states and the expansion of European power in the world. "In short, cannon stimulated a military revolution that gave birth not just to the modern state but to European hegemony in the world" (Morillo 2006, p.74). Parker therefore entered the field of the emerging discipline of world history, which in William McNeill already had a leader who attached great importance to the effect of military technology on patterns in global history (McNeill 1982).

In fact, Parker's contribution anticipated the "guns and germs" debate that flared up 10 years later between expansion historians and "new" military historians about the European expansion of power in the early modern period. The debate was triggered by the claims of evolutionary biologist Jared Diamond in his comprehensive best seller. He saw a connection between geographic location and the climate of Eurasia and North Africa and their greater power and more advanced technologies, as a result of which their civilizations were able to dominate those located elsewhere in the world (Diamond 1997; Raudzens 2003). Military historians also participated in the debate about the causes of European imperialism in the nineteenth century. This debate was given tremendous impetus by the publication in 1981 of *The Tools of Empire* by Daniel Headrick, who emphasized the crucial role of modern technology in this imperial expansion. In addition to the will to dominate, advanced firearm technology was one of the most important causes of European success (Headrick 1981). In line with this issue is that of the colonial state as "a state of violence" in which the threat or actual use of military force was the principal instrument of control. The problem concerning the frequently major role of soldiers in former colonies following independence must also be mentioned in this regard (Schulte Nordholt 2002). The complex relationship between "colony, empire and genocide" is likewise a challenging area (Moses 2008; Zimmerer 2019). Military historians can contribute to the study of these issues. They are already doing so with verve in the debate – they themselves dominate – about the colonial roots of current counterinsurgency doctrines (Porch 2011; French 2011; Luttikhuis and Moses 2014). For their part, naval historians stress the relevance of their subfield – which, although also military, is usually studied completely separately – by referring to the contributions that they can make to the European expansion debate and many other academic discussions, such as the debate about the link between maritime power, political liberty, and economic prosperity (Harding 2016, p.76).

The analysis carried out by Parker and others of the link between military developments and the rise of the modern state was, among other things, in line with the development of the fruitful concept of the "fiscal-military state," which focuses on the question as to how a state was able to generate more financial resources for its armed forces and for waging war by collecting more taxes (in exchange for more participation) (Brewer 1988; see also: Tilly 1992, 't Hart 1993, Glete 2002, Storrs 2009). There are various other relationships between the functioning of the armed forces and that of the state that "new" military historians

focus on or can focus on. Examples in this regard include the use of military successes in the creation and cultivation of national identities, such as was done particularly in the nineteenth century (e.g., Buschmann and Langewiesche 2003; Leonhard 2008). Military historians should not engage in such creation and cultivation. Rather, through broad research, they must decipher myths and place the actions of "great" generals and admirals in a balanced perspective. The role of the armed forces in maintaining or toppling the political order is also an interesting area of research. Virtually every country has had periods in its history in which its armed forces were more involved in domestic power struggles than in taking action against foreign adversaries. This issue partly overlaps with that concerning the sensitive relationship, certainly in liberal democracies, between the political establishment and the armed forces. Another approach that has aspects in common with military history is the link between domestic social tensions and military action taken abroad to mitigate these tensions, a link analyzed for the German Empire by Hans-Ulrich Wehler as early as 1973 (Wehler 1973). The same is true regarding research into links between politicians, the military leadership, and the business community, particularly the arms industry (the military-industrial complex).

Academic fields of study to which "new" military history can contribute and from which it can benefit include international relations (in the knowledge that the instrument of military force can have a different function within the various schools of thought and approaches), international law (for instance the interrelatedness of changes in warfare and the emergence and development of just war theory), war studies (the interplay between images of the enemy and the way in which military action is taken), political science (apart from the problem regarding political-military relations already referred to, one could consider the interaction between military action and public opinion), and conflict studies (the analysis of alliances, practices and discourses with which organizations and groups engage in violent conflict) (Demmers 2020). Within the field of history, there are possibilities with respect to, for instance, labor history (soldier's life as a special kind of labor) (e.g., Tilly and Tilly 1998, pp. 199–229; Zürcher 2013), the history of technology (cross-pollination in terms of civil and military technological development), and cultural history (e.g., applying the concepts, which relate primarily to political culture, of transfer and *histoire croisée* – the exchange or intertwining of ideas, customs, and institutions between countries or transnational groups – can, despite the limitations of the first concept in particular, also be fruitful in the military field) (Espagne and Werner 1987; Werner and Zimmermann 2006).

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## Risks

Despite the many positive aspects associated with the broadening of the "area of operations" of "new" military history, a few objections must be noted. As a few scholars have already pointed out, in addition to being sensitive to academic fashions, "modernising" drives can also end up functioning as a straitjacket into which one must fit to secure recognition and funding for research (Paret 1991, p. 17).

They even referred in this context to a smug “New Intolerance” and “the new holy trinity plus one: race, class, and gender in the workplace” (Lynn 1997, pp.780–781).

The methodologies used have also been criticized. This criticism is in keeping with the general criticism expressed by historians that social scientists are too eager to draw general conclusions from the study of only a few events or one aspect. For example, Bourke draws attention to the risk that some cultural approaches can result in cultural reductionism; that is, anything that cannot be explained is simply classified as being “culturally determined” (Bourke 2006, p. 274). Morillo points out the danger of technological determinism in the military revolution debate, including the one about the “revolution in military affairs” (RMA) that has been going on since the 1980s (Morillo 2006, p.79; Harding 2016, p.113). Moreover, it has been argued that a greater closeness to the social sciences would carry the risk of “Geschichte ohne den Menschen zu schreiben” (writing history without people) (Echternkamp 2010, p.13).

More fundamental are the objections that “new” military history has in many cases only served other disciplines and subdisciplines and, even more importantly, that the field of study has become too fragmented. It shares the second objection referred to with war studies, about which the following question has been asked: “What unifies this field of inquiry other than use of the word ‘war’ [...]?” (Barkawi 2011, p.130).

This brings us to the most fundamental objection regarding the wave of “new” theoretical, conceptual, and methodological approaches, often borrowed from other disciplines, namely that the field of study has become too far removed from its core object. The argument in this context is that the “war and society” approach tends “to take the actual conduct of war out of military history” (Morillo 2006, p.41; Showalter 2000, p.121; Black 2004, p.54). It focuses much more on the impact of war than on war itself and “most often stress[es] the military as a social institution and neglect[s] or even [denies] its combat essence” (Lynn 1997, p.784), or, as Bourke put it, “new military history sometimes threatens to reduce the complexity of armed conflict to mere crises of masculinity or tropes in the literary imagination” (Bourke 2006, p.260).

Most military historians would agree with Michael Howard: “At the centre of the history of war there must lie the study of military history – that is, the study of the central activity of the armed forces, that is, *fighting*” (Howard 2006). Keegan used similar words in *The Face of Battle*: “Military history [...] must in the last resort be about battle” (Keegan 1976, p.29; Gardiner 1988, p.6). At the same time, no self-respecting, academically trained military historian approaches a particular battle or campaign as something that occurred in a historical vacuum. He or she would agree with the words of Bernd Wegner: “Nur als integrierter Bestandteil einer Gesamtgeschichte des Krieges hätte eine moderne Operationsgeschichte ihre Daseinsberechtigung” (Only as an integral part of the overall history of war would a modern history of operations have its *raison d’être*) (Wegner 2000, p.113). Stig Förster provides a somewhat broader description, one that also relates to peacetime, that “new” military historians will be able to endorse: “Krieg als zentrales Thema der Militärgeschichte darf keinesfalls als Verengung auf die Geschichte der Kriege

misverstanden werden. Krieg ist vielmehr der unterschwellige Fixpunkt auch bei der Beschäftigung mit der Problematik von Militär und Gesellschaft im Frieden" (War as a central theme of military history must by no means be misunderstood as a limitation with respect to the history of wars. Rather, war is the subliminal fixed point even when dealing with the problems of the military and society in peacetime) (Förster 2000, p.266) In this case, "war" can also be read as "military action" in general.

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## The Way Ahead

If military history wishes to be and remain a full-fledged subdiscipline of history, it must have a clear focus and make a recognizable contribution to general historiography. This means that it must have its own field of research that few would dispute. This has consequences in terms of the subtopics selected for research, the methods used, and the interaction with other disciplines. Possibilities regarding theory building will also have to be explored. The great variety of approaches under the new military history umbrella already provides many points of reference.

The central subject of military history is military action. As indicated above, virtually all scholars engaged in the subdiscipline agree on this point. Military history research must be linked directly or indirectly to the actual deployment of military personnel or the possibility of actual deployment, preparations for deployment and direct effects in this context. While operational history constitutes the core, the context is just as important. It is about using a "comprehensive approach" to understand the military action concerned, or the threat of such action, and the success or failure of the action or threat thereof. Besides, in the words of Geoffrey Best, "Battles and how to fight them, Campaigns and how to conduct them, and the ways armed forces gear themselves up for these special tasks" (Gardiner 1988, p.12) – including factors like military organization, command and control, doctrines, tactical and operational planning, logistics, the quality and quantity of weapons and equipment, and the soldiers' training and conduct on the battlefield – it is about the international and national circumstances and the decisions that led to the deployment, the economic, financial, and organizational basis that made the deployment and its continuation possible, as well as the support for the deployment among the populace.

A comprehensive approach to military action taken in the past requires a multifaceted "plan of attack" with several possible "axes of attack." First, there is the historical axis of attack, which seeks to place the action in the chronological line of prior history-causes-trigger(s)-action-effects-consequences. Along this axis, the explanation of the military action is sought mainly in the historical context. The second option involves approaching the matter from the levels of military action; that is, the political strategic, military strategic, operational, tactical and technical levels, all of which are in an ends-means relationship with each other. Along this axis, outcomes of military deployment are mainly explained by referring to success or failure at one or more of these levels. A third possibility with respect to better

understanding military action is to consider it from five different levels, namely the individual level, the group level, the armed forces level or, as the case may be, armed forces sublevel (e.g., was there interservice rivalry?), the national level, and the international level (state and non-state actors). This is because what one observes depends on the position, or level, from which one is observing (Singer 1961). These three axes provide ample scope for the development of analytical perspectives and the use of concepts from other disciplines and subdisciplines, from biological, psychological, and sociological insights to explain the behavior of individual soldiers to the capitalist economic order to explain the belligerent behavior of states. Moreover, they provide scope for irrational behavior and misperceptions as explanatory factors and for concepts such as “coincidence,” “chance,” and “friction.” While it may not preclude risk altogether, a multidimensional comprehensive approach reduces the risk of deterministic explanations that are excessively finalistic or based on a single factor.

A fourth approach that can be used to secure an intellectual grasp of military intervention and the functioning of armed forces in earlier times is Carl von Clausewitz’s “paradoxical trinity.” The three tendencies that he distinguishes with respect to armed conflict (“primordial violence, hatred and enmity,” “chance and probability,” and “instrument of policy”) and that he linked in the context of his time to, respectively, “the people,” “the commander and his army” and “the government” (Clausewitz (1976), p.89), have, if we interpret the three elements broadly and, for example, read “the government” as “warring community” (Landmeter 2018b), an almost universal explanatory power (Strachan 2013). But even if the specific trinity of state (the government), armed forces and society is adhered to, the concept still raises relevant questions, for instance about public support for “wars of choice” (as opposed to “wars of necessity”). Did these contribute to the well-being and security of the people in accordance with the task of the state in the “social contract” that the state has with the people? In this military deployment, could the armed forces count on the public’s full support? Were these wars worth risking the lives of the state’s soldiers? This question had a major direct and indirect effect on the way in which military action was taken.

A fifth and sixth axis of attack can be distinguished. To really understand military action, the paths referred to above must also be walked in relation to the adversary (ies) and ally(ies). What factors made them act the way that they did? Furthermore, what perceptions existed about each other’s intentions and capabilities? Parties always acted in relation to each other. For this reason, only a comprehensive approach that takes all parties into account can provide genuine insight into the course of military action. Finally, a comparative approach can place the action in a broader synchronic or diachronic perspective and thereby say something about the degree of generality and uniqueness as well as the degree of continuity and discontinuity of this action.

A comprehensive approach to military action as described above does not deal with philosophical questions such as whether and why human beings tend toward evil. It is also not primarily intended for the formation of general theories about causes of wars. Furthermore, its purpose is not to provide ready-made “lessons” for



future action in the manner that was common in the past, and indeed remains common in many cases, at military academies. Nevertheless, like all good academic historiography that focuses above all on people's actions, the approach can help with respect to future action in the sense that it can broaden the horizon and increase the capacity to reflect of those who are open to the approach.

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## Conclusion

Although the purely military dimension of wars and conflicts is viewed in academic circles with less disdain than it was a few decades ago, it is by no means the case that this dimension is accorded its proper historical value. Even today, very few professional historians take the broad path of military history. This is a pity, because "new" military historians who use a comprehensive approach are best placed to explain how the course of military action has influenced the general course of history and thereby can make a full-fledged contribution to general historiography. This unique quality also gives them the ability and the right to participate in or even initiate broader academic debates.

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## Summary

"New military history" is a general term for the broadening – in subject, approaches and methods – of the traditional, narrow operational military historiography. The various "new" perspectives in military historiography – inspired by several "turns" in general historiography – have tremendously enhanced our understanding of military action in the past and present. The most fundamental objection regarding the wave of "new" theoretical, conceptual, and methodological approaches, often borrowed from other disciplines, is that the field of study has become too far removed from its core object, military action. The best way to analyze military action taken in the past is a "comprehensive approach," with a multifaceted "plan of attack" with several possible "axes of attack." "New" military historians who use a comprehensive approach are best placed to explain how the course of military action has influenced the general course of history and thereby can make a full-fledged contribution to general historiography. This unique quality also gives them the ability and the right to participate in or even initiate broader academic debates.



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# Military History and Military Theory

Fredrik Eriksson

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## Abstract

The purpose of this article is to discuss the relationship between military history and military theory through a chronological analysis. Military history in some form has always been used to formulate military theory i.e. generalizations of historical experience to guide action in the present and in the future. History is however hard to interpret, and has served different purposes over time. In the ancient world history linked to morality, and historiography contained practice advice for generals. The scientific revolution saw the birth of scientific laws for warfare, inspired by natural sciences i.e. codifying historical experience. The Napoleonic era saw the birth of modern warfare and the development of modern military theory. Jomini synthesized the Enlightenment with experiences of the Napoleonic wars into scientific principles of war. From a Romantic historical tradition came Clausewitz, a historicist general focused on understanding the nature of war. For Clausewitz history was about understanding, and could not be used for scientific principles. In the same era came Marxism – a materialist,

F. Eriksson (✉)  
Military History Division, Swedish Defence University, Stockholm, Sweden  
e-mail: [fredrik.eriksson@fhs.se](mailto:fredrik.eriksson@fhs.se)

deterministic theory of history, influencing for example Russian and Chinese military thinking as well as theories of guerilla war. Using military history to create military theory still revolves around the dialectic, will history repeat itself or not? If it does, then it can be used for formulating theory. If it doesn't, history can be used for understanding the past and as a guide. Every new generation of the military have reinvented and reinterpreted history. Most of the doctrines and theories of warfare today rests on a mixture of concepts from both Clausewitz and from Jomini – and in every case military history is the very foundation of both. The dialectic relationship between military history and military theory seems to be as old as the phenomenon of war itself.

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### Keywords

Military history · Military theory · Military doctrine · Clausewitz jomini · Modern warfare

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## Introduction

War is a human phenomena that occurs everywhere and has done so throughout the ages. This has given rise to both military history and military theory as fields of study. The relationship between them is not a simple one. At the heart of the problem lies the way in which historical experience can be turned into generalizations and principles for warfare to suit an agenda. To what degree are such generalizations applicable in other contexts than the historical setting in which they originated? There is no absolute contradiction between the Humanities and Social Sciences in approaching theory and history, but there are nevertheless significant differences in approach. Military historians study unique, particular, concrete events and processes to establish (as best as possible) the facts surrounding events. Social scientists study structural similarities, to draw general conclusions about them. Historians stress historical context and theorists stress the use of historical evidence for theory. In 1992, the then Under Secretary for the United States Air Force wrote, “It is up to historians to forge a client relationship [with the military] and innovate and create the products that will prove most effective in contributing to policy and decision making” (Foremann 1992, p. XII). This illustrates a demand on history that history simply cannot deliver.

Over 60 years ago, historian Sir Michael Howard pointed out that for the military, historical experience serves as a guide for military action. History allows the military to study their own profession when there are no wars to fight (Howard 1962). Through studying history, it is possible to understand military development and doctrine. In contrast to military officers, many historians claim that they study “what really happened” as opposed to what other commentators say happened. Many historians also find the “use” of history problematic, as they believe that history is studied in its own right. Historians often try to *understand* history, as opposed to theoretical approaches aimed at analyzing broad similarities to predict future

developments based upon it. Herein lies the philosophical dilemma – will history repeat itself? Can it be used as foundation for theory and doctrine? Military history is an important foundation for military theory, but there are also other sources. For example, experiments can be used in some theoretical contexts. There are also axioms not founded in military history present in military theory. In fact, military history and military theory are intertwined and cannot easily be separated. Historian Margaret MacMillan discusses the *abuse of history* by the military and above all by political leaders. Historical experiences have been consciously neglected, misinterpreted, or made unrecognizable. British leaders in 2002, before the invasion of Iraq, consciously neglected the advice of the experts on Iraqi history and society. The 2008 report on the war in Iraq mentioned a lack of information on the country in the initial stages, although said information evidently had been ignored (MacMillan 2010).

This chronological account of the relationship between military history and military theory in the Western World starts with a discussion on history and military theory in antiquity and the medieval world. This is followed by the simultaneous scientific and military revolutions. Modern military theory was born in the Napoleonic wars, after which Jomini and Clausewitz changed military theory forever. Up until then, military theory consisted of advice and ideas of best practice. Clausewitz and Jomini have been reinterpreted many times and still influence military thought. Before Jomini and Clausewitz, there was no real difference between military history and military theory. Many theorists emerge at the turn of the twentieth century, all departing from Jomini and Clausewitz, in different combinations.

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## Antiquity and the Medieval World

In antiquity, history was the moral code of society and supplied a gallery of good and evil characters, describing the nature of leaders and states. In ancient thinking, outcome in wars rested in the morality of the leaders involved. In ancient historiography, there were few accounts of real events but rather idealized stories portraying good and evil. In Greek historiography of military campaigns, factors such as victory, loss, courage, and surprise were described. Herodotos (approx. 485–425 BC) described the known world and the background to the Persian Wars (492–449 BC) in his *Historia*. For Herodotos, war was the result of low morality among the leaders (Tejada 2004; Waters 2013).

Thucydides (approx. 460–399 BC), a general during the Peloponnesian Wars (431–404 BC), was the most important ancient historian. Thucydides formulated a military theory based on his own experience and the collection of firsthand sources, focusing on the different aspects of war. He differed from his predecessors in using eyewitness accounts as sources (albeit he seldom referenced them). Although a skeptic of storytelling, Thucydides still explained victory and loss in war as functions of individual character (Zagorin 2008; Rood 2004; Greenwood 2015). Another approach is found in Xenophon (approx. 430–355 BC), himself a mercenary, describing campaigns in Persia in *Anabasis*, and in the *Hellenica*, he described the

history of the latter parts of the Peloponnesian Wars, analyzing the Spartan victory. His books were especially dedicated to military men featuring advice, but as an historian, he is widely considered to be unreliable (Tuplin 2004; Dillery 2013).

The Greek texts lived on in the Roman Empire, and historiography continued to portray history as moral examples. In *Histories*, Polybius (approx. 200–118 BC) described the Punic Wars (264–146 BC), analyzing Roman victory as one of superior morality – the creation of military force was a moral achievement, but his texts also described Roman tactics (Hau 2016). Through *Histories*, Polybius's ideas on personal discipline, frugality, and Roman traditions were spread as military knowledge.

Chronicles of emperors and events were also important in Roman historiography. Julius Caesar (100–44 BC) wrote treatises on the civil war and the war in Gaul, *Commentarii De Bello Gallico*. These “commentaries” were certainly political documents as opposed to historical accounts. Caesar himself was uninterested in writing about military theory or in spreading knowledge on military matters for future generations. His interests were solely political (Schauer 2016). Roman historians like Tacitus (56–120 AD) and Suetonius (69–122 AD) both wrote historical chronicles, describing events, travels, and emperors, focusing on character as well as particularities. But, many of the Roman chronicles were heavily biased and are unreliable as historical sources.

Most ancient texts were lost to the West with the fall of Rome but lived on in Moslem and Byzantine worlds. The most influential writer of the late Roman Empire was Vegetius (fourth century). In *De Rei Militaris*, he advocated the return to heavy infantry drawn from Roman citizens, as opposed to recruiting barbarian mercenaries. Vegetius described ideal military institutions, training, discipline, rules, and practices for officers and soldiers, preaching caution and to avoid battle unless conditions were beneficial. His popularity increased during the Middle Ages, with around 150 known copies, and his thoughts remained influential well into the 1700s. One reason for this is that *De Rei Militaris* contains short enlightening maxims, for example, “if you want peace, prepare for war” (Allmand 2011; Phillips 1985). In that respect, he somewhat resembles Sun Tzu (approx. 544–496 BC).

In the Middle Ages, military theory and military history were linked to religion and to the Roman chronicle tradition. Chronicles listed events as occurrences but without causal links to why they occurred. There was no interest in theorizing over military matters as history and war were seen as exercises in morality, leadership, and virtue. One of the more interesting thinkers of the Medieval period was Christine de Pizan with *Livre des fais d'armes et de chevalerie*. It was a set of military and political advice for the French royal family during the Hundred Years War (1337–1453), often referencing Roman history (Adams 2014). Her writings were not only influential in her time but also taken up in later centuries if not always attributed directly by subsequent authors.

Many ancient texts reemerged in the West during the fifteenth-century Renaissance. The most important factor was the Gutenberg printing press decreasing the price of books – one of first military texts printed was Thucydides, followed by Xenophon, Herodotos, Tacitus, Polybius, and Caesar. Vegetius was printed for the first

time in 1473 initializing the spread of military theory based on history. Although Vegetius wrote a historical work in the fourth century, he was used in the 1500s as inspiration for the optimum infantry organization. Vegetius inspired military thinkers in finding the perfect formation of troops (Allmand 2011; Neill 1998). A more independent literature on military matters developed in the Italian city-states during the Renaissance. Niccolò Machiavelli (1469–1527) *Dell'arte della guerra* from 1521 became influential, although Machiavelli departed from Vegetius. Machiavelli was interested in the essence of war and used history as an argument for the use of citizen soldiers as opposed to condottieri, much in the same manner as Vegetius preferred Roman citizen-soldiers to mercenaries (Gilbert 1986).

Although ancient and medieval history were chronological descriptions of morality and events, ancient and medieval historians aspired to truthful representations of history, if conclusions were to be drawn. Military history and theory were supposed to bring practical advice, as well as illustrating strategy and tactics. Contemporary historians and military theorists believed that it was both possible and desirable to draw far-reaching conclusions from history.

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## Military and Scientific Revolution

During the 1500s, standing armies and a professional officer corps emerged, calling for more substantial military theory. Gunpowder did not change the character of warfare until around 1600, when the military gunpowder revolution occurred. The new way of war combined agile units of musketeers with mobile artillery and new cavalry tactics. Dutch proponents of this revolutionary way of war combined tactical reforms with finances, military education, armaments, and fortifications. Part of this revolution meant the construction of fortresses in the Italian city-states. Important was also the French Marshal Sébastien La Prestre de Vauban (1633–1707), the foremost expert of the time, in combining artillery and fortifications (Roberts 1992; Glete 1993; Parker 1996; Ostwald 2007).

Military theory in the 1500s and 1600s was characterized by slightly updated classical works. A wide variety of literature was published on military matters – mostly in the form of summaries of what military officers should know, condensed historical accounts, technical advice, and moral lessons (Ericson Wolke 2007). The scientific revolution of the 1600s saw the rise of more “scientific” military thinking – one of the more important proponents was Raimondo Montecuccoli, R. (1609–1680) with his primary work *Memorie della Guerra* (*On the Art of War* or *Treatise of War*) combined contemporary mysticism and alchemy with classical military thought and contemporary thinkers. His universal claims systematized war – defining it as the inflicting of damage in every way to achieve victory (Rothenberg 1986; Gat 2001). Montecuccoli borrowed from other writers, for example, the diary of Scottish general Robert Monro (1601–1680) in Swedish service (in turn Monro referenced Roman historians such as Plinius and Vegetius) (Murdoch and Grosjean 2014). The military thinking of Swedish king Gustavus Adolphus (1594–1632) was very influential, for example, through the book *The Swedish Discipline* in 1632. Montecuccoli



himself was not immediately influential but was only posthumously referred to by many military theorists.

Despite this, it is important to note that Montecuccoli and his contemporaries frequently used rediscovered ancient texts in their writings. Greek and Roman histories remained important sources of knowledge in the 1600s, and ancient historiography was seen as factual historical descriptions (Ericson Wolke 2007). With the scientific revolution and the Enlightenment came the notion of natural laws governing everything in human existence. For military theory, this meant the notion that there were scientific principles of war, based on history, that could be codified (Duffy 1987; Gat 2001).

Maurice de Saxe (1696–1750), one of the more influential military thinkers of the period, saw war as systematic scientific exercises. In *Les Rêveries* from 1732, he incorporated thoughts on coincidence, declaring that both generalship and genius were needed to transform scientific laws of war into proper action. In the book *Esprit des loix de la tactique et de differents institutions militaires* from 1762, he discussed the importance of strategy as opposed to most of his contemporaries (and predecessors) obsessed with tactics and ideal formations. De Saxe promoted the formation of a modern “Roman legion” – a brigade consisting of infantry, cavalry, artillery, and a permanent staff. This was an early version of combined arms apt at fighting by itself or together with other “legions” (Ericson Wolke 2007; Gat 2001).

Jacques François de Chesteret de Puységur (1656–1743) conveyed an important view on the relationship between military history and military theory in *Art de la Guerre par principes et par règles* from 1748. Puységur maintained that war lacked theoretical and systematic study, instead relying on tradition and experience. The solution was historical observation of the full scope of historical experience as a source of military theory. But for Puységur, history was complex and could not easily be transformed into scientific principles, just because it rested on uncertain, personal experiences (Gat 2001).

During the Enlightenment, historiography was at a turning point. Historical truth, realism, and factual descriptions were debated. To formulate military theory, history had to be a proper, truthful description of reality, to use as a source for theory. During the Enlightenment, classical works were still used as reliable sources, although the texts mixed superstition, myths, and fables with factual information. Radical historian Edward Gibbon (1737–1794) in *The History of the Decline and Fall of the Roman Empire* (1776–1789) maintained that Rome fell to barbarian invasions through the loss of civic virtue – the highpoint was the Roman republic and successive emperors had defiled the civic virtues that made Rome great. Gibbon used antiquity to debate contemporary problems, basing his assumptions in classical texts.

During the Enlightenment, military theory became more “scientific” – in some respects geometrical. Theories of war were about reason, control, equilibrium, and balance, aiming to establish strategic principles based on quantifiable data. Historical examples were used to illustrate defined theoretical principles. Frederick “the Great” (1712–1786), Henry Lloyd (approx. 1718–1783), and Comte de Guibert (1743–17909) all used military history as evidence for systematic and mechanical

theories. Guibert sought inspiration in the Macedonian phalanx of Alexander the Great (356–323 BC) when he promoted the use of columns to break up the regulated linear tactics of the 1700s (Palmer 1986; Gat 2001).

The most influential military thinker to emerge from the Enlightenment was Antoine Henri Jomini (1779–1869), himself a soldier. Serving under Napoleon (1769–1821), he wrote two crucial treatises – *Traité de grand tactique* and *Traité des grands opérations militaires*. In these treatises, he combined historical evidence from older periods with thoughts from other military authors and his own experience. Jomini proclaimed that “principles of war” were fundamental and eternal. It was the task of the genius to apply the principles of war in the right way. Jomini lived through a period of stark military change and he structured the military knowledge of his contemporaries. He maintained that the evidence of military history all pointed to the same type of principles. For Jomini, and also for Napoleon, history played the crucial role of forming rational principles that did not take human factors into account. These reason-based principles portrayed warfare as predictable as long as the principles of war were followed (Shy 1986; Pitchichero 2017). Jomini’s writings were full of historical references, as well as references to the operational principles of Napoleon. Jomini is still an important military thinker, particularly influencing American military theory during the twentieth century. Even today, the notion of eternal principles of war remains strong among many military practitioners and theorists.

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## The Romantic Revolution

The Revolutionary and Napoleonic wars symbolized the entry into the modern world, not least regarding the way history is written. German philosophers – Kant, Hegel, Goethe, Herder, Fichte, Leibnitz, Schelling, and others – contributed to *historicism* and *historism*. At the core of Romantic thinking stood the concept that human existence could not be reduced to abstract mechanical principles (Garrard 2006).

Historicism meant explaining different social and cultural phenomena by studying its history. G.W.F. Hegel (1770–1831) promoted historicism through dialectics. The “dialectic” or opposing forces of human purpose and the current situation drove historical development. The Hegelian system is often described as thesis – antithesis – synthesis, although Hegel himself never used those words. The human drive towards the “ultimate purpose” was described by Hegel as *geist* (spirit) – an abstraction explaining historical change. In history, the term *zeitgeist*, means the particular spirit of a certain era – that can explain why people thought and acted the way they did during a period. Hegel has inspired Marxism, particularly through concepts of ultimate purpose, as teleological reasoning – that history has a distinct predetermined direction.

Leopold von Ranke (1795–1886), the father of *historism*, on the other hand, held that the purpose is to study history for its own sake. Historism denounces teleological reasoning and sees history as unpredictable. History does not, accordingly, have

any particular purpose. It is just there, waiting to be interpreted. Ranke and other historians advocated *understanding* and hermeneutics to interpret the past. Ranke was a nonspeculative historian – it was unacceptable for him to “fill in the blanks” through recreating historical dialogue and courses of events if sources were unavailable. Ranke, like Hegel, believed that history was an expression of some sort of divine intelligence or *geist*. For Ranke, history should be studied objectively, with universal and factual aspirations. He formulated a modern version of source critique, i.e., a system to assess historical sources. The task of the historian was to investigate what really happened, through the use of credible sources, as expressed through the phrase – “*Wie es eigentlich gewesen*” (how it really was) (Iggers 1968; Ranke & Iggers 1973; Boldt 2019). The Romantic schools of history were reactions against the ideals of rationality and reason of the Enlightenment.

Carl von Clausewitz (1780–1831) was a product of both the Enlightenment and Romanticism, mixing concepts from both schools. A forerunner to Clausewitz was Georg Heinrich von Berenhorst (1733–1814), who in *Betrachtungen über die Kriegskunst* (*Reflections of the Art of War* 1796–1799) concluded that war is an a posteriori science derived from experience (Gat 2001; Allert 1996). Gerhard von Scharnhorst (1755–1813) believed that only the study of history was insufficient to create laws of warfare. The art of war was partly subject to mathematical laws, but depended at the same time on circumstance. Scharnhorst influenced officer education through handbooks, emphasizing the use of military history (Dupuy 1977; Gat 2001). Scharnhorst was the father of the Prussian general staff founded in 1816, with military history being one of the five original departments. To Scharnhorst, military studies, theory, and military history were one and the same (Friedman 2021).

Clausewitz was just as much a historicist as many of his contemporaries. He separated science and art, maintaining that individual motivation and genius of generals were crucial. Morale and motivation could not be scientifically explained. Clausewitz searched for a complete theory, encompassing all aspects of war. In the study of the campaigns of Gustavus Adolphus, he concluded that the outcome of war depended on the state of the adversaries, the role of the people, their customs, politics, spirit, and culture. In *Vom Kriege* (*On War*), Clausewitz wrote that circumstance influenced war in a way that cut across general principles. As such, historical experience became the source of all knowledge (Paret 1976; Gat 2001).

In *Vom Kriege*, Book II chapter 6, Clausewitz discussed military history and the use of historical examples in the same way as Scharnhorst. For Clausewitz, war was an art as well as an empirical science. The nature of things could only be understood through experience – history. Sources had to be correctly processed and come from the most recent military history. For Clausewitz, there were four uses for historical examples:

1. As an explanation of an idea or an abstract relationship
2. To show applications of an idea
3. To invoke a historical fact to contradict an idea
4. To draw conclusions through a complete account of a historical event or a compilation of several events (Clausewitz 1991/2006)

To Clausewitz, military history was about determining historical facts and derive *causal relationships* in history to become a better officer. When there was a lack of sources, the task was to come as “close to the truth” as possible with the sources available. History was about understanding context and give insight, revealing the nature of things, and could as such be used as theory. Clausewitz wanted to determine the nature of war, not define scientific laws or positive doctrines in warfare – in the positivist sense. For Clausewitz, doctrine was contrary to understanding war. Related to this was Clausewitz’s use of the term “friction.” Because the nature of war was too complex, things would not proceed according to a preconceived plan, hence the futility of trying to establish natural laws on war. Clausewitz believed that warfare contained universal elements – he believed there to be a universal theory of war that correlated to the nature of war itself. But human nature was irrational and consequently war was just as much an irrational occurrence. In the same way as other early historicists, he believed that certain universal elements, although hard to find, existed governing the course of history (Heuser 2002).

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## The German School

The technical and ideological revolutions of the nineteenth century changed warfare through the upgrading of roads and the establishment of railways, the telegraph, quick-firing weapons, conscription, and burgeoning “nationalism.” The telegraph allowed centralization in command, railways allowed the transport, and subsistence of troops and armaments development strengthened defensive warfare. The concepts of the *decisive battle* came to dominate military thinking of the late nineteenth and early twentieth centuries. Concepts of war combined with modern nationalism bred ideas of manifest national destiny expressed as offensive and decisive battle. National destiny was a transfer of the *geist* to a nation. In Germany, Helmuth von Moltke the Elder (1800–1891) symbolized a fusion of historicism and critical-historical realism (Kessel 1957). War was about Clausewitzian intuition and understanding war in its own context, without overarching principles. Moltke (and Alfred von Schlieffen, 1833–1913) dogmatized decisive battle, through their Clausewitz-interpretation (Wallach 1967; Johansson 1988).

Hans Delbrück (1848–1929), distinguished himself from most military theorists of the time in being a trained historian. He was the father of modern military history. Delbrück believed that the military leaders of Germany based their assumptions on inadequate historical standards and a dogmatized understanding of history. As a modern historian, Delbrück proposed critical source studies to dismiss older history writing. In *Geschichte der Kriegskunst im Rahmen der Politische Geschichte* (*History of the Art of War within the Framework of Political History*, 1900–1920), Delbrück created a categorization of war – different wars had different strategic aims depending on the particular circumstances in which they were fought. Through studying the Peloponnesian War, he concluded that there were two main means to achieve victory – either by annihilation or by attrition. Consequently, maneuvering

to avoid battle was equal to fighting a battle in a theoretical sense. He concluded that different historical settings gave rise to different parts of strategy, and history could be used to analyze war as part of human culture (Bucholz 1985). Before the First World War, Delbrück promoted a German strategy of attrition. He therefore came at odds with German General Staff in the *Strategiestreit*. Delbrück's thinking was anathema to the General Staff's goal of annihilating the enemy. Delbrück is still an influential military historian through his methodological approach to military history, including demographics and economy in the analysis.

Naval theorists, such as Alfred Thayer Mahan (1840–1914) and Julian Corbett (1854–1922), both used history to formulate comprehensive theories of warfare. Mahan's *The Influence of Sea Power Upon History 1660–1783* (1890) was a historical study of naval warfare and the projection of power. Mahan belonged to the same historical *zeitgeist* as his contemporaries but combined it with a Jominist approach. For Mahan, sea power rested upon geographical considerations (position, natural resources, territorial expanse, and population) governing trade, as well as cultural factors (the character of peoples and governments). Mahan believed in the existence of specific national characters and used history to illustrate the impact of this – the English and Dutch were born traders and as such managed to create trading empires; conversely, Spaniards and the Portuguese created empires but were unsuccessful traders. The vision of the decisive battle, and the risks involved, influenced Mahan's thinking (Mahan 1890; Hattendorf 1991). Corbett published his seminal work *Some Principles of Maritime Strategy* in 1918. He maintained that through historical analysis and comparisons, it was possible to formulate theoretical laws. Corbett's studies were influenced by his contemporary thoughts on war – he discussed the nature of war, offensive or defensive, limited or unlimited, and relating both to a variety of historical examples, much in the way of Clausewitz and Scharnhorst before him (Corbett 1918). Both Mahan and Corbett used history as prescribed by Clausewitz, both as examples to promote ideas, and also through giving a complete account of history as pertinent to the situation at hand. At the same time, Mahan was also influenced by the Jominist concepts of principles. Both formulated influential theories of naval warfare – “fleet in being,” concentration or dispersion and commercial raiding.

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## The World Wars

The experiences of the First World War can be summarized in the dialectic between defensive and offensive, combined with modern technology of aeroplanes and armored warfare. The analysis of the war was not different from earlier studies of the Napoleonic wars, i.e., a historical analysis of the most recently fought war (Posen 1984; Kier 1997). Nonetheless, the experiences of the First World War were tremendous for the world, individual states, and armies. The experiences of war influenced military theory, particularly concerning defensive versus offensive warfare, but there were distinct differences between different actors. Germany was defeated and incorporated reforms, the British and French, less so.

J.F.C. Fuller (1878–1966), a prolific writer and influential theorist, published *The Foundations of the Science of War* in 1926. It was an attempt at formulating a scientific approach to military history, the author believing that history had never previously been treated in a scientific manner. Fuller used archetypes and taxonomies to establish nine principles of war, which in turn have collectively become an important inspiration in the training of officers. Fuller has particularly influenced American military thinking. In his *The Decisive Battles of the Western World and Their Influence upon History* (1954–1956), he discussed military battles from antiquity to the Second World War. He was not a trained historian, and his conclusions were sometimes peculiar and sometimes conveying mythological descriptions of ancient warfare. Nonetheless, Fuller has influenced the formulation of military principles through the use of history. He was a late successor of both Jomini and of Charles Ardant du Picq (1821–1870), a French officer promoting the idea of *élan vital* – manifest spirit as a way to win wars. Fuller wanted to formulate principles and regarded spirit and morale as important elements in warfare. He has made an everlasting impact on military theory through his definition of the basic elements of combat – movement, fire, and protection.

Basil Liddell Hart (1895–1970), a contemporary of Fuller, is one of the more influential military theorists of the twentieth century. In the 1929 *Decisive Wars in History*, he stressed the importance of maneuver and surprise. The most desirable outcome was to make the enemy surrender without a fight. Liddell Hart relied heavily on military history to draw his theoretical conclusions. He promoted the concept on indirect warfare, as opposed to direct, with attacks on the point where the enemy was strongest. He criticized the thoughts of the decisive battle prior to the First World War, as being too direct and costly. In his later book *Strategy* (1954), Liddell Hart advocated the *indirect approach* – basing his conclusions on historical precedents drawing on historical conclusions. According to him, history had to be studied broadly to draw meaningful conclusions, as opposed to narrowly scrutinizing single campaigns in search of individual solutions (Liddell Hart reprint 1991). Nevertheless, also Liddell Hart interpreted historical evidence in a way that strengthened his own concepts – examples were chosen ad hoc and he himself used history much in the same way as the victims of his critique. For example, he proclaimed that the German strategy of the Second World War was indirect, because the Germans tried to win the war by surprise and psychology – explained by the example of the German attack on France in 1940. When Germany turned on the USSR in a direct attack, according to Liddell Hart, the *Wehrmacht* became bogged down and eventually lost the war. The problem lies in Liddell Hart's use of military history which raises many difficult questions. For example, what actually differed between the German campaign in France in 1940 and against the USSR in 1941? Is it possible to take different examples and compare them in this way? Which were the causal explanations for the outcome? Liddell Hart evidently cherry-picked history to find examples to reinforce his arguments rather than approaching history holistically.

Both Liddell Hart and Fuller were positivists in the spirit of Jomini, reducing history into theoretical principles of war. Liddell Hart in particular has influenced Western military theory of the Cold War, and Fuller has influenced officer training.

Both are still read in military schools throughout the Western World despite the contentious nature of their writings.

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## Marxism, Communism, and Military History

The *Communist Manifesto* of 1848 spurred the development of the Marxist theory of history, *historical materialism*. For Karl Marx (1818–1883) and Friedrich Engels (1820–1895) class, labor, means of production and social institutions/superstructure were expressions of production and ownership. Historical development was teleological, occurred in stages, each characterized by modes of production and technological level. Revolutions occurred or stagnation followed when production no longer could develop within its social institutions. Revolutions were violent upheavals transferring power between classes. The ultimate stage was the classless or communist society. Marxism is a deterministic school of historical realism (Anderson 1983).

Engels was the most important Marxist military historian. In *Der Deutsche Bauernkrieg* from 1850, Engels accredited the entry of capitalism to the German Peasant War (1524–1526). He was inspired by Clausewitz in as much as wars were seen as political, and for Engels, politics was a continuation of class struggle. Also, Marx published texts on military history, for instance, on the guerilla fighting in the Peninsular War (1807–1814). In the guise of Lenin (1870–1924), Marxism became the driving force for revolutionary war. In *State and Revolution* from 1917, Lenin took the experiences from the 1848 revolution and the 1871 Paris Commune, and transformed them into a theory of revolutionary warfare. For Marxist-Leninists, this ideology of war was useful as a way to break down state structures. It represented a materialist historiography transformed into a military “manual.” Subsequently, however, conflicts between Leninists, Stalinists, and Trotskyists created different approaches to revolutionary warfare (Benvenuti 1988).

In the 1930s, Soviet military theorists set out to reformulate Marxist-Leninist concepts of warfare. Marxists were obsessed with technological change (new means and forms of war), identifying revolutions and various stages in military history – collectively as elements of Marxist analysis. The most important factor was the definition of *depth* and *breakthrough* – i.e., striking at the enemy’s rear (not unlike Liddell Hart’s discussions on striking the lines of communication) and the “invention” of operational art (Adamsky 2010; Harrison 2001). The military thinking of Mikhail Tuchachevsky (1893–1937), Vladimir Triandafillov (1894–1931), Mikhail Frunze (1885–1925), and Georgii Isserson (1898–1976) are examples of Marxist studies in military history. As an example, Isserson – a relatively unknown military theorist – wrote *The Evolution of Operation Art* in 1932. A large part of the book dealt with the heritage of the past. He defined the Napoleonic wars as a new era in warfare and studied the battles of Napoleon, the American Civil War, Franco-Prussian War, Russo-Japanese War, and the First World War. The insights from history were transformed into concepts of depth, breakthrough, and how to organize the operational level in war (Harrison 2010). The Soviet concepts of *Deep Battle* built on a Marxist analysis of military history and continuously developed during the Second World War and thereafter.



## Guerilla War, Counterinsurgency, and Military History

It is common to distinguish between regular and irregular warfare. The division is in itself ahistorical – what is the definition of regular warfare? Is it war fought according to particular principles? Is then an irregular war fought without principles? States have throughout history fought insurrections of different kinds, particularly the great empires. Clausewitz talked of *Kleinkrieg* as opposed to *Volkskrieg*. Several examples of military theorists fighting irregular wars have written about their experiences, notably T.E. Lawrence (1888–1935) in *Seven Pillars of Wisdom* from 1935. As a concept, “Counter-insurgency” also had supporting theorists, for example, C.E. Callwell (1859–1928), the author of *Small Wars: Their Principles and Practice* from 1896. One of the more influential theorists was David Galula (1919–1967), a French officer fighting in Indochina and Algeria. He studied Mao Zedong (1893–1976) and other Marxist thinkers to be able to fight the guerillas inspired by these thinkers. In his books *Pacification in Algeria* and *Contre-insurrection: théorie et pratique*, from 1963 and 1964, respectively, Galula contributed to the theoretical and historical analysis of conflicts. From a military standpoint, the French operations in Algeria were successful (Corum 2008), not least because of the influence of Galula. However, the French won the battles but lost the war on the political level.

Connected to Marxist ideology is *Revolutionary War/Guerilla War*, and the most influential thinker on the topic is Mao Zedong with his *On Guerilla Warfare* from 1937. Mao wrote in the tradition of Chinese philosophy and particularly Sun Tzu. Mao conceived guerilla war as consisting of three phases – organization/consolidation, progressive expansion, and destruction of the enemy – the same kind of deterministic stages found in Marxist theory of historical development. Mao departed from a historical class-analysis of Chinese society, negating the working class as the revolutionary vanguard, promoting the peasants. Mao based his assumptions on an analysis of Chinese society and history but was still influenced by the Western way of war. He stated that a guerilla movement that followed his principles could not be defeated. The use of history is evident in all Marxist military theory, and during the Cold War, guerillas were inspired by Maoist thinking.

The problem of trying to utilize a successful counterinsurgency campaign is found in trying to transfer insights from one historical setting to another. The Malayan Insurgency in the 1950s proved to be one of the few successful operations of that kind of operation. However, experiences from Malaya could not easily be transferred to Kenya, Cyprus, Vietnam, or other places. This is the problem of *principles* of war, as opposed to *understanding* the complexity of each individual case. This illuminates the differences between Jomini and Clausewitz. It is not uncommon that military theorists try to interpret current phenomena and look for evidence in history, without taking the changing historical context into account. The historian, on the other hand, rarely realizes tactical and technical challenges, and consequently finds it hard to draw military conclusions (Howard 1962).

Returning to Michael Howard’s statements on the military uses of history. War occurs again and again and military historians can draw conclusions from historical cases of what is victory, what is defeat, and what were the reasons for war. It is therefore possible to draw conclusions through historical studies of the past.



Consequently Howard proposed three rules for the military in studying history. Firstly, study history broadly and with a long chronological perspective to learn from continuity and discontinuity in military actions across the ages. Secondly, scrutinize case studies in depth, using firsthand accounts in an effort to understand in detail what happened in particular events. Thirdly, study history in context by understanding all available perspectives and seeing all aspects of society to be able to distinguish social, economic, and political factors in military history (Howard 1962). There are similarities in the way Clausewitz viewed history and in the thoughts put forth by Howard. The reason for this is that Clausewitz was inspired by Hegelian historicism – as many historians of the twentieth century were. Howard was intimately familiar with the work of Clausewitz and participated in the English translation of his works. Although Howard first set forth his views in his speech in 1961, it was published in 1962, and it still provides valid advice for a military study of history – and a solid reminder that formulating principles and theories on the basis of military history is a difficult task.

Military theory typically builds on history, although theory can in principle also be derived from other sources, such as axioms or experiments. The problem is usually the arbitrary nature of historical examples and the lack of a wider holistic approach that can help determining the usefulness of the theory and the validity of its empirical foundations. Whereas military history, at least according to Clausewitz, can explain and clarify theory. Historical examples can easily be falsified when they are turned into principles. History is not a collection for the military to cherry-pick fitting examples depending on the setting. History is ever changing and cannot be understood outside its context, since according to Herakleitos, one cannot dive into the same river twice. History replaces personal experience of warfare, when educating military personal – but the purpose of military history is not to “deliver” theory.

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## Cross-References

- [Concept of Sea Power](#)
- [History and the Development of Military Psychology](#)
- [Military History: An introduction](#)
- [Military Operations and Operations in irregular warfare](#)

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# Military History and Collective Identity

Carmen-Sorina Rijnoveanu

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## Abstract

Each country has a national story that forges a sense of identity and – as Patrick Finney put it – while language, religion, culture, and traditions are key elements, war has traditionally been at the core of identity construction, shaping the collective national sentiment and the sense of Self (Finney, *Remembering the Road to World War Two: International history, national identity, collective memory*. Routledge, 2011).

Recently, scholars have increasingly become interested in the way in which war and war experiences frame collective identities. From this perspective war and identity are closely intertwined, and this interactive process can explain not only how identities are created but how they may produce various typologies of warfare practices and states’ conduct. Such a conceptual paradigm provides new windows to a study of past wars but also prepares the ground for a better understating of current or future conflicts.

Which role does military history play in the collective identity of nations and other collectives, how does war memory shape the architecture of identity construction, and how does identity-memory dynamics frame states’ strategic thinking? These are the central questions of this text. While the possible answers

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C.-S. Rijnoveanu (✉)

Institute for Political Studies of Defense and Military History, Bukarest, Rumänien

to such questions depend on multiple variables, there is a broad scholarly consensus that this is an area of research that needs to be further explored, especially in the light of new advancements in the field of cultural and social studies. Wars are fought on two main fronts: on the battlefield and in people's minds where it maintains an enduring influence that is preserved over generations. The way people remember and memorialize the experiences of war allows us to gain a more comprehensive view on the set of practices, norms, values, and emotions that shape collective identities and determine typologies of state behavior in military and security affairs.

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**Keywords**

War · Identity · Collective memory · Remembrance · Strategic culture · Military history

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**Introduction: The Constructed Nature of Identity**

With the emergence of the “new military history,” the study of war has evolved significantly and is now integrating a broader research perspective that exceeds the restrictive battle-descriptive construct which played a prominent part in traditional writings about military history, by seeking the nexus between the armies and the societies. War is a complex phenomenon which cannot be understood only in terms of battles, strategies, and military maneuvers. The battlefield integrates two main theaters of war – the military-operational one and the civilian one – connected by human tragedy, suffering, and the collective trauma. The impact and consequences of war in relation to societies, human behavior, and state conduct help us comprehend multiple faces of war which go beyond the actual warfare. Therefore, the military history research should look at recent conceptual and theoretical trends that have emerged as part of the growing influence from cultural and social studies. The new research trends require new paradigmatic approaches and methodological tools of research that integrate a host of other disciplines, especially history, sociology, psychology, anthropology, and cultural studies.

Studying cultural aspects of war can tell us more about how and why people fight; how the parties at war face the trauma of violence; how emotions and feelings influence the fighting capacity, in which way the experience of war is being memorialized; and how memory frames the dynamics of identity formation and state conduct (Black, 2004). There are also important psychological factors which explain the war dynamics and give us valuable insights into the fabric of warfare. In the words of John Keegan, the outcome of a war – however strong the capabilities and however high the commanding skills or operational thinking – significantly rests on the fighting capacity of the soldiers, their motivation to fight, the combative spirit, and their willingness to face death (Keegan, 1983).

Questions of identity have been central to scholarly debates since the turn of the twentieth century. “Who we are” is the central question shaping the discussions on

identity issues. While some scholars argue that identity is formed on the basis of the primordial ties of blood, kinship, language, and common history, others consider that the term should not be seen as a static concept, but as a comprehensive and dynamic process that is produced and reproduced under various circumstances, integrating human dispositions, practices, and emotions that people share collectively and which they have internalized through socialization (education, politics, the media, sports, or everyday practices) (Wodak et al., 2009).

Discussing the basic concepts of the creation of identity, the closest field is the research on nationalism in the 1980s and 1990s which speaks about the immense influence that nationalism has exerted on identity construction. There is a rich literature on nationalism that has produced a variety of findings and theories on how nationalism/national identity develops as closely interconnected concepts. For Charles Kupchan, nationalism is, at its core, about identity that is rooted in a shared ethnicity, lineage, language, culture, religion, or citizenship (Kupchan, 1995). As other scholars argue, national identity may be defined as “a body of people who feel that they are a nation as a cohesive whole, as represented by distinctive traditions, culture, symbols, and language” (Emerson, 1960; Guibernau, 2004). The exiting attributes that shape the concept of identity do not entirely explain the dynamics of the identity construct. Benedict Anderson (1983) defines a nation as *imagined communities* because “the members of even the smallest nation will never know most of their fellow members, meet them, or even hear of them, yet in the minds of each lives the image of their communion” (Anderson, 2006). A nation in the form of “imagined communities” is a socially constructed community that gives its members a sense of identity and belonging, thus reflecting people’s need to define themselves and others and make people perceive themselves as part of that group. We might thus say that while maintaining its primary characteristics that make people feel as part of a distinct national group, identity is socially constructed and may evolve constantly over time under specific conditions and influences.

Building on the existing attributes, the concept of identity integrates a set of practices of memory and collective remembrance that speak about the centrality of war and of its experiences to the national consciousness. Certainly, war creates a powerful sense of shared identity that unites people, but it also produces mental gaps that separate or distinguish them from others. Defeats, suffering, humiliation, or great military victories leave deep traces in people’s memory and prepares the ground for forging a sense of identity. However, especially important – in the words of Black – “war, in the shape of images of violence, answers to something deep in the human psyche, at least insofar as framing identities are concerned. It helps define groups and provides them with an apparent coherence” (Black, 2004: 17).

The past traumatic events, which shape the way in which collectives and nations continue to look at themselves and relate to others, provide better grounds for people to construct their identity. As Carpentier argues, war draws an imagined frontier between “us” and “them,” between the Self and the Other, identified as the Enemy. Although the Self and the Enemy share antagonistic identities, they need each other in order to voice their own distinct identities (Carpentier, 2015: 4). Identity, however,

is not a fixed process. The paradigmatic identification Self versus the Other helps a group achieve more cohesiveness and self-definition, but the way in which the war memory is processed as part of the identity building process is first and foremost determined by narratives. This thesis has been explored extensively as part of the identity building analysis. Wodak, De Cillia, Reisigl, and Liebhart (1999) have identified language and discourse as the essential instruments in the social construction of imagined communities. In their view, the discursive constructs of nations and national identities are key tools that emphasize national uniqueness and intra-national uniformity, and, in doing so, the members of a national community simultaneously construct the distinctions between themselves and other nations.

The way we see others speaks about complex identity dynamics that takes shape through the power of language. The way in which the experiences of war are put into a narrative is part of a particular set of beliefs, feelings, and perceptions that together create distinct stories, acts of remembrance, and memories that people identify with and that are absorbed over generations (Porter, 2007). The fundamental question is *who* is creating the narrative, as it determines the main actors involved and their interests in projecting specific patterns of identity formation. The elites have a considerable ability to shape the central symbols and images that constitute national identity (Kupchan, 1995) and, thus, to generate specific discursive typologies. They have the necessary mechanisms to produce national symbols in terms of monuments, museums, or other historical sites that shape a nation's story. Here, the media also plays an increasingly significant role. As Anderson rightly observed, mass media is a key instrument in the social construction of imagined communities, changing the perceptions and emotions of the members of the group/community/nation and producing patterns of homogenous identification that strengthen the sense of who we are (Anderson, 2006).

While people form their own beliefs and convictions that help forge a sense of collective identification, they can be easily taught or influenced through the power of discourse how to look at their history and how to relate to others. Different typologies of discourse can create different historical narratives that can change people's perceptions of what constitutes their national identity.

The German case is especially worth discussing since its collective identity construction in the twentieth century was the result of dramatic changes that forced the entire nation to rethink who they were and how to identify themselves with their past. The major shift that shaped the German identity was the result of two catastrophic wars. In the aftermath of the First World War, the defeat was used to create a national consciousness that at its core had the need to legitimize the war and therefore saw the emergence of a cult of war dead and praise of the military who remained – according to the general perception – undefeated on the battlefield. It also led to the search for ways to overcome the feeling of humiliation that was inflicted upon the country at the end of the war. The main narrative claimed that Germany was defeated, humiliated, and treated unjustly through complicit political games despite being militarily undefeated. The defeat discourse prepared the ground for powerful nationalistic feelings and strengthened nationalism and enforced what G. Mosse called the Myth of the War Experience (Mosse, 1990). The Second World War

generated a paradigmatic change through a new and innovative discursive agenda. As R. Wittlinger has pointed out, the single most important factor that determined the character as well as the nature of the postwar German identity was the legacy of the National Socialist past and the Second World War that led to the moral and military defeat of Germany. The collective memory of the Nazi past provided the basic narrative for the creation of a new identity, one which had to find a place for the Holocaust and the Second World War in the national consciousness (Wittlinger, 2010). The identity discourse generated a radical shift from nationalism to patriotism based on the concept of nation. The result was a new German collective identity, based on a commitment to democratic principles, values, and institutions – in other words, a post-national identity shaped through the lens of a normative collective identity that was to provide a way out of the German dilemma of how to deal with the horrors of the past while finding a new place and role in the international arena. Considering Germany's central geopolitical role in Europe, the transformative process of identity would have far-reaching consequences.

This is why it is important how the history of wars is put into a narrative, how people speak about their past, and what are the intentions of the main actors involved in creating narratives. As Wang argues, it is nearly impossible to divorce our own perceptions from the semi-orchestrated construction of our national or political narrative (2012: 3). The state's capacity to shape patterns of memories and collective identity remains a central feature in the analysis of the dynamics of identity formation.

Building on this paradigmatic approach, we treat the concept of identity as socially constructed – *imagined communities* – and thus subject to change through shifting narratives and discourses. The memory of war – created by collectives or politically driven – remains a major vehicle in this change due to the importance of historical narratives in preparing the ground for national and other senses of identity.

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## Military History and “Memory Turn”

Starting in the mid-twentieth century, the craft of history is particularly entangled with the contemporary “memory boom” or “memory turn” that weighs heavily on the growing interest in cultural and memory studies (Winter, 2006; Finney, 2014). With the Great War and the Second World War, the cult of memory spreads widely as a global phenomenon, but the recent decades have further accelerated this trend. The Centennial of the Great War and various anniversary events dedicated to the Second World War further fueled the “memory boom” phenomenon that owes much to the constant and growing public interest in the accumulated trauma and catastrophic experiences of war (Finney, 2014). Building on the new scholarly investigations, the connection between war, memory, and identity was increasingly being researched systematically, adding new dimensions to the military history study.

While it is widely assumed that memory has nowadays become a major focus of scholarly and public interest, there is no clear consensus as how to define and understand memory. The modern collective memory of war builds on traditions



and rituals which go back to the American Civil War and stretched through the First World War and the Second World War. However, scholars searching for the concept of memory acknowledge its complexity and the difficulty to address it. The works of Neff (2005), Desjardins (2003), Kansteiner (2002), and Kramer (2007), to mention just a few, bring valuable contributions to the scholarly investigation and understanding of the collective memory construct, but questions still remain. Building on the subject of memory, Maurice Halbwachs who pioneered the research in memory studies, maintains that memory is framed within a social setting, and when collectives come together to recall significant events of the past, they create collective memory (Halbwachs, 1992). The same argument is used by Meghan Tinsley who considers collective memory to be a joint understanding of the past, developed and shared by members of nations, religions, or ethnic groups (Tinsley, 2015). For Jay Winter, the collective memory is constructed through the action of groups or individuals who come together to remember (Winter & Sivan, 1999). Here, the distinction is between individual or passive memory and collective memory which implies a social setting. In other words, the collective memory of war is not what everybody thinks or remembers about a war. Building on the issue of memory, Winter assumes that collective memory first and foremost constitutes acts of remembrance (Winter, 2006). It is about how wars, soldiers, and victims of war are remembered through collective actions (ceremonies, monuments, films, culture, etc.). The patterns of remembrance are an important indicator of how people and collectives relate to past war experiences and how they translate their perceptions and feelings into narratives as part of the collective memory building. According to John R. Gillis, "The core meaning of any individual or group identity, namely, a sense of sameness over time and space, is sustained by remembering; and what is remembered is defined by the assumed identity" (Gillis, 1994: 3). In other words, how a war is remembered – with defeats and victories, collective trauma, and suffering – reveals and shapes a sense of Self. Traumatic memories of war persist, but the way they are remembered can change the substance of the memory narrative in multiple ways. Collective memory consists of multi-layered connections between often contradictory modes of understanding and competing narratives of the past (Wodak et al., 2009). The key question is: how war and war experiences need to be remembered and in which way the war memories can help form patterns of collective identities?

There is a multitude of ways in which collective memory is standardized and reproduced (Roudometof, 2002: 7). The relationship between memory and identity is largely produced by various forms of cultural or religious practices that incorporate commemoration, remembrance, and public military ceremonies. People are encouraged to remember their past and create collective imagery that is absorbed as part of their national consciousness. Military history books, archives, museums, war monuments, memories, or images that remind us about the past all contribute to the process of constructing and preserving memory because they create the national heritage foundation and speak about the unique national character. The memory sites become the expression of remembering and mourning, connecting people through collective grief, gratitude, or national pride, thus providing a powerful sense of group

allegiance. Here, the role of the state remains an important driver in the process. National holidays, ceremonies, and military parades are all organized by the state with the specific aim to encourage people to remember and teach them what/how to remember and what to forget (Wang, 2012: 3). As some scholars have acknowledged, what to remember and what parts of history should be forgotten is a decision made primarily by the political elites (Wang, 2012: 3). Regardless of ideological character, political regimes have a natural tendency to adopt a selective memory of war, one which focuses on specific events and that may produce a powerful collective impact by placing certain events into the national consciousness while silencing or forgetting others. The collective memory of the First World War in Romania provides such an example. Romania entered the war in August 1916 but was soon defeated by the forces of the Central Powers (in December, the capital of the country was occupied by the enemy forces). The memory of the defeat was to be silenced by means of the important military success reached by the Romanian military in the summer of 1917 during the battles of Marasti, Marasesti, and Oituz. The events of July–August 1917 were to remain and be celebrated as trademarks of national glory and the spirit of sacrifice in the service of the country, thus shaping the entire memory of war and leaving deep traces in the national consciousness. The Mausoleum of Marasesti, which was erected on the place where the battle of Marasesti took place, is now a symbol of commemoration and national gratitude and a central site where military ceremonies are held, honoring the memory of all those who gave their lives saving the country.

In Russia, the collective memory of the Second World War is a major state enterprise aiming at increasing the national spirit of solidarity, patriotism, and national attachment toward a glorious past (Merridale, 2009; Putin, 2020). The memory of the Bolshevik atrocities, Stalinist crimes, or the Ribbentrop-Molotov Pact are all silenced, while the great military victories during the Second World War and the immense national collective sacrifice were to become the dominant features of the national identity construct, closely watched by the state authorities.

The “turn to memory” also reveals the growing interest of the public in the story of war. War remains a highly popular subject, enjoying a great deal of appeal across generations. The last decades have seen a surge of this trend. While its popularity continues to expand apace, the public contribution to the history of war opened new and innovative ways of looking at and understanding warfare-related matters. War seen through the people’s eyes becomes a social and cultural experience that can both challenge and enrich the old research paradigms of studying military history. There is a strong link between the process in which the commemoration and memorialization of individual wars shape collective memories and that in which the use of the vocabulary and imagery of conflict helps make war a key social experience, even for those who have not seen fighting (Black, 2004).

The study of the memorialization of war allows the integration of multiple voices, in written or oral form, from memoirs to contemporary letters and interviews as well as abstract recollections based on pictures, photographs, and images. All these create a large body of non-archival sources that can open unknown windows to the study of military history and provide significant sources of knowledge to military

historians. However, not only historians tap in to these sources, but also poets, filmmakers, television producers, illustrators, artists, popular culture, and the streets (as public spaces) provide a contribution of their own by creating and promoting memory trends (Carpentier, 2015). There is a large technological and media infrastructure which includes the print trade, the art market, the mass circulation press, the film industry, and the developments in photography that together create powerful channels for the dissemination of texts, images, and narratives about the past. As the war continues to draw widespread attention, the popular culture has adjusted to this trend by integrating a large body of war-related subjects. The war is the subject of songs, movies, documentaries, novels, and artwork – every conceivable form of entertainment and culture.

The memory of war integrates also the voices of those who experienced the war. Any traces of memory coming from the direct participants – in terms of letters, diaries, and memoirs – help recreate a multitude of war images. To use John Keegan's words, "allowing the combatants to speak for themselves, when and where possible, is an essential ingredient of battle narrative and battle analysis" (Keegan, 1983: 46). Listening to the voices of participants at war and giving them the space to talk about their fears, suffering, emotions, and trauma of death provide new sources of conducting military history research. The impact of imagery reflected in photographs or pictures can add genuine insights into the experience of war. The variety of films, television programs, documentaries, or book publications that address the issue of war is the result of but also the engine driving the public fascination about war-related issues. These days, Internet and social media are important tools of transmitting across the society the historical experience of others and allowing the public to share their own views and get engaged in vivid debates regarding the experience of war. This is another way of constructing narratives and fosters a kind of memory that is not scholarly grounded, but rather based on feelings, convictions, and beliefs that people build and adopt collectively.

The Great War Centennial events emphasized this trend even further as they triggered a significant interest in the war among diverse groups who contributed through collection of documents, memoirs, photographs, family objects, pictures, and other images of the past, all of them adding new pieces to the archival repositories of the national collective memory. All these items constitute new war evidence that give valuable insights into the human experiences and the cultural impact of war trauma on people and societies (Langenbacher and Shain, 2010).

The shift in public interest regarding the memory of war by incorporation of the societal and cultural dimension is well noticed when we look at the changing patterns of remembrance. The great military events remain part of large public commemoration activities (e.g., Battle of Somme, Battle of Verdun, Battle of Normandy), but the message and the subject of remembrance have been significantly reframed in line with the changing memory narratives. What and how people should remember are important questions that help understand the deep connection between memory and mental representation of war. To use Eyerman's words: "how an event is remembered is intimately entwined with how it is represented" (Eyerman, 2001).

The practice of remembrance of the two great wars of the twentieth century highlights a significant change of paradigm that says a lot about how people memorialize war and how remembrance practice may construct/reconstruct identities. While in the years following the end of the Great War, the soldier stood at the center of remembrance activities – built on the symbol of the Grave of the Unknown Soldier – the last decades have witnessed a gradual change of paradigm. The collective memory of the First World War is now increasingly shaped by the images of human tragedy and the horrors of trench warfare, while the suffering of the people on and behind the battlefield also plays a more prominent role in the collective and public memory. Such representation of war had a significant impact on how we see today the Second World War which adds new meanings to the construction of historical memory. The wounds inflicted by war on civilians and the human tragedies provoked by the war erased the borderline between the military and civilians, as both paid their own price as victims of the same conflict. The amplitude of human suffering covering a much broader field of casualties – including pogroms, genocide, the Holocaust, mass killing, or dislocation of the population – challenged the old assumptions that war is only about the history of fighting. The growing public interest in the non-military aspects of war speaks about new mental constructions of war which focus on individual and collective experiences. In other words, it is not solely the war, but the human suffering caused by the war that significantly frames the collective memory building, adding new dimensions to the patterns of remembrance.

The two great wars of the twentieth century changed the paradigm of remembrance, integrating more cultural and societal elements with special focus on human suffering, trauma, and the horrors of war experienced by the society at large. In a general perspective, the memory of trauma, tragedy, or suffering brings people closer together and help forge a sense of belonging that is absorbed in the collective mindset. But the same traumatic feelings may also keep people apart. As we shall see below, this behavioral dynamic is getting more evident when we look at the subjects that presently dominate the public interest in the history of war, creating new typologies of memory narratives and identity formation.

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## **The Use of War Memory in Constructing Identity Typologies**

Divided historical memories or a gap in identities can draw deep fault lines among people and nations. Such dynamics creates antagonistic views and hostile perceptions that significantly frame the way people see or interpret the actions of others, leading to mutual adversity that is reproduced and transmitted over generations. The memory of war is a major source of hate, hostility, resentment, and antagonism that can become central to a population's sense of its shared identity. Both the academic and public domains, either through schools or through arts, popular culture, and mass media, may contribute to the dissemination of past grievances that encourage mutual adversity and turn history into a battlefield of narratives of the imagined historical truth. Tensions over history still remain a powerful obstacle that hinder

efforts at reconciliation and can turn into a major geopolitical challenge, even among allies. The geopolitical situation in Northeast Asia or the South China Sea weighs heavily on the controversial historical dossiers that still haunt the present political views and actions of the regional countries, as the relations between Japan and South Korea or China and Japan provide good examples.

The relations between Russia and its neighbors are, to a large extent, shaped by their complicated history that has resulted in growing feelings of fear, mistrust, and suspicion regarding the Russian actions in the region (Cioculescu, 2013). Many countries develop a mythology of victimhood that is used to create a positive self-image built on the victim-perpetrator dichotomy. The traumatic emotions of suffering, losses, and betrayal are deeply embodied in the collective memory and produce a powerful sense of shared identity. The Munich Agreement of September 1938, the Ribbentrop-Molotov Pact of August 1939, or the post-war agreement of 1945–1946 heavily marked the collective memory of most of the countries in Central/Eastern Europe. These events inflicted fears of being betrayed or left isolated as victims of Great Power politics. The Polish example is a good case in point. Here, the ample national remembrance manifestations organized annually and dedicated to the Second World War are especially centered on Poland's role as a victim in both the war and in the peace that followed (Ochman, 2013). Feelings of victimization and hopelessness came to symbolize the deepest fears and threats, fueling their collective memory representation and identity construction. A different image of victimhood is also promoted by Hungary – the image of being a victim of injustice and humiliation. From this perspective, the Trianon Treaty is remembered as a tragedy of historical proportions, while many Hungarians relate to it as almost a personal trauma. The feeling of victimization is also a dominant feature in the war memory of the Arab countries whose collective memory regarding the Great War is filled with feelings of resentments, frustration, and betrayal toward the Western European Empires.

The memorialization process centered on war, and war experience is an important indicator of states' political conduct in both domestic politics and international affairs. It speaks about states' critical security concerns but also about the psychological grievances that might affect their behavior and influence the way they look at others as potential allies or foes. Memory of war can be changed through narratives, and, here, the political discourse has an important role to play. The way an event is remembered is a product and a consequence of how that specific event is translated into language and, especially important, how it is instrumentalized through political narrative.

In a broader perspective, the memory of wars is at the forefront of an ongoing battle over collective memory, a dynamic process which reflects not only the people's convictions but a host of political interests and state agendas. War is a primary topic to be exploited politically by certain groups that have an interest in manipulating the historical truth or presenting it in a selective form to serve political purpose. This creates specific historical narratives that are implemented in an organized manner, through school curricula and academia to state agencies, state-controlled media, and propaganda instruments promoted by network of social or

political organization. This approach is especially obvious in case of the history of the Second World War.

Certainly, for most of the Western countries, the Second World War plays a central part in the national identity construction although this happened in radically different manners. In the case of Germany, the memory is shaped in terms of reconciliation and forgiveness while assuming the responsibility for past mistakes. For Britain and the USA, it is about the ultimate sacrifice required to save humankind from the evil shadow of Nazism and Fascism and help the countries regain their freedom. For many countries from Central/Eastern Europe, the Second World War is regarded as the primordial historical phenomenon that profoundly changed their history. It remains deeply embodied in the collective memory as the symbol of national trauma, injustice, and suffering, leaving deep traces in the national psyche and creating a sense of martyrdom. In Russia, the Great Patriotic War became the very foundation of the Soviet/Russian identity built on the memory of bravery, spirit of sacrifice, human tragedy, and military greatness of the Russian/Soviet nation that made the final victory over Nazism possible. For many countries in Asia, the trauma of the Japanese occupation is a defining feature of their national collective memories which still profoundly shapes their national psyche.

However, identity is not a static phenomenon. It evolves over time through various formal or informal tools of learning, and/or this is especially important, as a result of politically driving agendas. Emotions expressed in terms of hostility, hate, or reconciliation are not a given thing, but rather a product of external factors. Therefore, identity formation is a learning process, teaching people how to use the memory of war or how to remember their own past in order to create patterns of identification. Here, we may currently find two forms of political discursive approaches. On the one hand, we find the political discourse that uses the war memory in order to forge an identity based on the ideology of nationalism and patriotism as in the case of Russia and other countries that follow a nationalistic path. The goal is not only to encourage the development of a specific collective memory but to use it as a way of creating powerful bridges between the state and the population. In other words, the capacity to mobilize the people through memory and practices of remembrance plays a significant role in creating a specific pattern of identity that can be instrumentalized for the benefit of the political power either to increase its legitimacy or consolidate public support for its policies.

On the other hand, the political discourse elsewhere is moving toward a more societal narrative: a trend that has gained special prominence in Western Europe. It emphasizes the need to use memory of war as a platform to create cross-national identities with a special focus on reconciliation, tolerance, and lessons to be learned from the war experience. This is a new paradigmatic approach that seeks to replace the hostility discourse with a more formative narrative that can create bridges among people based on unifying messages. Germany is an important voice, in driving a new approach in terms of memorializing and remembrance practices. In his speech delivered at the Franco-German conference "Winning Peace" in Berlin on October 11, 2018, the German Foreign Minister Heiko Maas, noted that: "The future needs remembrance. The past is an indelible part of our identity. It serves as a reminder and

teaches us, for today, but also for tomorrow” (Maas, 2018). According to Maas, the reason “why peace could not take hold after the Great War was because it was simply not possible to create peace in the hearts and minds of the people.”

The new European narrative is intended to introduce a new pattern of collective memory that is now part of remembering the victims and the human tragedy. However, at the same time, it is about lessons that may be transmitted to the next generations. The key concepts are reconciliation and forgiveness as a way of building a new memory of war and a new identity. Apology diplomacy has been a major tactical means in the reconciliation process. The German leaders have issued a number of direct apologies for the Nazi past crimes. Regrets have been also expressed by Japanese heads of government to both China and Korea on different occasions. Most recently, attending the ceremonies organized in Poland for the 75th commemoration of the outbreak of the Second World War, the German president Frank-Walter Steinmeier apologized for Germany’s actions in war: “My country unleashed a horrific war that would cost more than 50 million people – among them millions of Polish citizens – their lives. . . This was a German crime” (Steinmeier, 2019). In line with the German narrative, the European message calls for a new kind of collective remembrance aiming at teaching people how to look at their past, not to forget the past horrors, to pay tribute to all those who suffered and made the ultimate sacrifice in the service of their country, and to respect their memory. From this perspective, the study of war is seen as playing an important role as part of a formative process that builds upon the shared experiences of war to prepare the grounds for a peaceful and more secure future. The memory of war and the remembrance activities may unite individuals, collectives, and nations and provide the foundation for a new identity construction characterized by tolerance, forgiveness, and reconciliation. Such a pan-European identity forged on the ashes of war can replace the old-fashioned identity defined along strict ethno-national lines, used to produce homogenous national identities, that was a major cause of hostilities and conflicts throughout the twentieth century.

## **Identity, Collective Memory, and Strategic Culture**

The analysis of wars and conflicts tell us that culture plays an important role in explaining how and why people fight and how states act in times of military crises and geopolitical turbulences. As part of this conceptual understanding, the study of the link between cultural factors of war, historical memory, identity formation, and states’ security behavior opens new perspectives of research in the field of military history and helps us examine the nature and the dynamics of states’ strategic thinking and specific attitudes to war.

Long-neglected in the international relations (IR) academic theories, assuming that it had a minimal influence in explaining war-related matters or the dynamics of international politics, the issue of identity has been reconsidered. The advancement of IR constructivist theory gave new impulses when studying the identity-related matters and their impact on shaping states’ conduct. An important focus of the

constructivist IR scholars was to investigate how collective identities are formed and what role they play in shaping national interests, the development of foreign policy directions, and the evolution of international rules, norms, and institutions (Neumann, 1998). Extending the framework of analysis, the IR constructivist theory assumes that it is not only the structure that shapes the power and interests within the international system, but that ideas and perceptions play an equally important role (Wendt, 1995).

Building on the new theoretical advancements, war memory serves as an important factor that can influence the decision-making process and the way in which different actors understand and interpret the nature of conflict. War and trauma associated with it create a historical baggage of accumulated experiences, beliefs, practices, and ideas that leave enduring legacies in a state's strategic thinking and allow us to understand the deep historical roots that shape states' actions and motivate their decisions. Against this background, each country develops its own strategic narrative and security culture that reflect specific identities and emphasize national attributes as deriving from historical experiences. It is a fairly common argument that the term strategic culture integrates a set of beliefs, attitudes, and preferences held by strategic decision-makers regarding the use of force, the object of war, and the most effective means of achieving it (Snyder, 1977; Porter, 2007; Longhurst, 2004). In other words, strategic culture is essentially an attempt to integrate cultural considerations, cumulative historical memory, and their influences in the analysis of state security policies and international relations (Al-Rodhan, 2015).

The way in which states process and memorialize their past and traumatic war experiences often plays a key role in explaining their attitudes toward war and how they behave in the context of war. It provides valuable insights and help decipher how states build their agenda of security priorities, how they consider their strategic options, and how they adjust their strategies of actions and strategic narratives. National pride, prestige, and esteem are important variables that motivate states' conduct as well as their aspirations and constraints in the international system. The strategic mindset remains deeply rooted in past grievances, anxieties, frustrations, fears, or ambitions and aspirations that unveil states' sources of self-perception and the perception of "the others." Relations between states are in many ways a product of their history and historical interactions, and here the wars and conflicts have an important role to play.

The memory of war and how memories are translated into military practice say much about states' military and strategic cultures. This is especially important nowadays when we see that history continues to haunt states' collective mindset, at the same time as the consequences of the recent traumatic past are still fresh on their mind, exerting considerable influence over their behavior. The foreign and security policy of China or Russia is simply impossible to decipher without taking into consideration the deep historical and cultural roots that shaped it.

The feelings of insecurity, victimization, and humiliation or betrayal leave enduring legacies and, in many cases, strongly influence the national strategic thinking. For China, the "century of humiliation" inflicted by the West and Japan in the



nineteenth and early twentieth centuries is the formative historical process that defines its current international posture and security objectives. The entire political and state apparatus, academic curriculum, and state propaganda are mobilized to underline the endurance of the Chinese people vis-à-vis foreign invaders and its peaceful and inoffensive intentions toward the others. The main argument is that China, throughout her history, did not act as an aggressive actor, but it was a victim of others' hostile actions. Past defeats are now a historical motivator for forging a new pattern of international behavior rooted in a growing nationalist feeling and the great power ambitions seen as a defensive shield against any foreign attempt to humiliate China again. In the words of Stephen R. Platt, "There is a lingering memory of that history from the 18<sup>th</sup> century that goes a long way to explain the desire in China for a global trading order that works more on China terms" (Platt, 2018).

Russia is a similar case as her historical memory is the product of the way in which past war traumas are processed as part of the national identity and strategic narrative. The fear of foreign aggression – deeply embodied in the Russian collective psyche – coupled with its geographical vulnerability and the memory of victimization remain the core of Russian strategic culture and identity formation. From this perspective, the Great Patriotic War came to symbolize the Messianic struggle to defend the country against foreign enemies and serve as a model of all wars – which inevitably have a defensive character – that Russia has to fight against real or invented threats. Russia developed an obsession with a culture of insecurity that turned into a quest for territory as the only buffer against potential invaders. In the words of former Soviet diplomat, M.M. Litvinov, "The more territory you have the safer you are" (Constantiniu, 2010).

The culture of insecurity is an important motivator that can explain states' reactions and choices in connection with present-day events as can be seen in the reaction by Poland and the Baltic States in connection with Russia's actions against Ukraine in 2014 (Lucas, 2015). These countries harbor a sense of victimization in the collective memory of their relationship with Russia. The historical memory of their past military experiences and the centuries-long trauma of Russian occupation remain the main factor driving their feelings of insecurity and vulnerability and, as a result, shaping their strategic reactions and political decisions. The lessons they learned from their recent war experiences are a powerful engine which make their present security agenda focus on searching for credible defense commitments and strong military alliances, as the only strategy to provide for their defense against a potential Russian threat (Kulesa, 2016; Dueck, 2017; Hunt, 2018; Hodges et al., 2020).

In other cases, the impact of collective memory of war on the strategic culture takes place through a different logic that is not necessarily connected to the feeling of insecurity and past grievances, but is the result of a transformative process often stemming from a strategic shock. Germany provides an example worth noting. The feelings of guilt and shame coupled with the psychological burden of the Nazi past came to weigh heavily on Germany's historical narratives, leading to a profound change in the German strategic culture and its strategic identity. The militarist spirit

that inspired the Prussian military traditions during the last two centuries has been replaced by a new strategic culture that is pacifist, passive, and restrained. Germany assumed the status of civilian power that defined a new role for Germany within the Great Power configuration. The new non-militarist spirit cannot be understood without a close examination of those features that marked Germany's war experience, especially in the twentieth century and created particular patterns of collective memory. Due to its past war experiences, Germany has developed a culture of war avoidance combined with a diplomacy characterized by moral and normative principles of international law that translate into an assumed reluctance regarding the potential deployments of German military force abroad.

The preeminence of normative strategic culture is evident in the case of the USA as well but with significant differences. The Civil War, the Second World War, and the Vietnam War impacted the way the USA looked at war and utility of force. It is not only the competitive nature of international politics that frames state conduct, as claimed by the neo-realistic school of international relations, rather there are various domestic and ideological factors with important roots in the collective memory and identity formation. The commitment to democratic values, human rights, and liberties overwhelmingly shapes the US's strategic culture and military intervention rhetoric and has forged a sense of exceptionalism that implies that the country is both destined and entitled to play a distinct and positive role on the world stage (Al-Rodhan, 2015). As part of this conceptual thinking, the use of force is seen as a tool to protect peace in the name of liberal democratic principles and individual freedom. The use of military force is justified on moral grounds that legitimize the military interventions and justify the war rhetoric, defined as a struggle of good versus evil.

The way in which states look at their past and memorialize their war experiences provides valuable insights into the fabric of their current strategic thinking. Certainly, the emerging strategic realities and military technological advancements under the impact of globalization create new challenges, forcing states to readjust their military strategies and ways of war. In that sense, past wars may be of little or no relevance to future wars. However, the study of war history remains today as relevant as before. Moreover, the way in which past conflicts are translated into collective memory helps us decipher new perspectives, national and collective, regarding the issue of war and to explain various typologies of states' military behavior and strategic options in times of crisis.

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## Conclusion

The growing influence of cultural and social studies provides new methodological and analytical lens which allows a better view and understanding the history of warfare and its impact on contemporary society. War as an extremely traumatic event strongly contributes to uniting people and creating strong bridges across generations, but at the same time, it may be a cause of deep fault lines among people and countries that continue to keep them apart. The way in which people and collectives remember

and memorialize wars creates patterns of identity that profoundly shape how people think about themselves, how they perceive others, and how states frame their agendas of actions and interests in the international system.

However, the integration of identity and memory studies as part of military history writing is not fully accepted, and it even raises powerful criticism among scholars. Their main concern regards the danger of allowing memory turning into a freewheeling historical agent in its own right, thus weakening the role of critical thinking or historical analysis which stays at the foundation of military history study (Klein, 2000). The argument is that the collective memory is a subjective-formative process that tells us a lot about war experiences, based on people's emotions, perceptions, and feelings, but they do not provide a credible research method to replace the long-standing tradition of scientific objectivity. As claimed by some scholars, military history has the unique mission of writing about war, using credible empirical information and avoiding subjective interpretations which do not comply with the historical truth. To Michael Howard, at the center of the history of war, there must lie the study of military history, "that is, the study of the central activity of the armed forces, that is, *fighting*" (Howard, 2006).

Certainly, the archives and documentary evidence remain the main depository of historical information, and they play a critical role when conducting war history research. My argument is that the archives are not the only reservoir of information that we need to understand or study war. The scholarly developments over the last decades have shown us that the study of military history needs to integrate multiple voices and extend its area of research by considering new fields and tools of analysis. It is not about the lack of historical objectivity but the changing purpose of writing about the past, and here the collective memory plays an increasingly significant role, allowing us to discover new faces of war and to bring new voices into the story of war.

Military history has an important formative function that is built around the significance of war in creating/recreating patterns of collective behavior, cultural values, national identities, or strategic mindsets. Warfare is also about the individuals and their direct experience of combat, and, thus, what the direct participants say and how they confront the experience of battle can substantially enrich war studies and bring new perspectives to the understanding of the issue of war and conflicts. Military history plays an important role in studying and explaining the way in which people and countries look at war and the utility of force and how war experiences frame their patterns of behavior and strategic conduct. The past is a valuable reservoir of knowledge and information to help us understand how identities and historical memories shape states' typologies of strategic and military actions.

The way in which people and nations memorialize their war experiences and how war memory is used to form collective identity remains an important source of hostility and mistrust that influences regional and international relations. However, at the same time, as dynamic processes, both memory and identity can be changed through historical narratives. The role of military history is not only to inform but also to teach and help people learn from past experiences. The terms of reconciliation and tolerance are nowadays playing a more prominent role in the discursive

approaches to memory and identity. We speak more about the war as a collective trauma that has provoked overwhelming human suffering, affecting all people, societies, and countries.

The dynamics and scale of human suffering of the two world wars forged new frames for the memorialization process with a lasting impact on both political and public cultures. This can be noticed in the systematic attempt to produce a new European political discourse, one which speaks about war as a traumatic event, the tragedy and human suffering of which need to unite people as the only way to prevent such horrors from happening again. Using this logic, the memory of war needs to be focused on lessons to be learned and on creating patterns of behavior and practices that drive people toward reconciliation and understanding. War should be seen as a bridge connecting people through past tragedy, suffering, and death as a way of creating a motivator for building a future together, free of all the past grievances and tragic experiences.

This is a new paradigm that calls for a new military history construct, one which pays increased attention to the shifting discourses about memory and identity that have already opened new windows to the understanding of war and to new ways of conducting military history research.

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## Summary

### Chapter I: Military History and “Memory Turn”

The chapter discusses the concept of collective memory seeking to understand how memory of the past is constructed, shaped, preserved, and transmitted over generations. The central question is how war is remembered and how the war memories form patterns of collective identity. Various forms of remembrance are an important indicator of how people and collectives relate to past war experiences, and how they translate their perceptions and feelings into narratives as part of the collective memory building. Within this framework, we may understand the complex relationship between war memory, identity formation, and the societal dynamics of remembering and forgetting.

### Chapter II: The Use of War Memory in Constructing Identity Typologies

The chapter discusses the significance of war memories in constructing identity typologies and how they can create divisions and hostility among people and nations. Victimhood and traumatic emotions are deeply ingrained in collective memory, influencing identity construction. At the same time, memory of war is a learning process that shapes patterns of identification, with political discourse either fostering nationalism and patriotism or advocating for cross-national identities through reconciliation and tolerance. Against this background, the memorialization of war memories reflects states’ political and sociocultural behavior, which might influence their behavior toward one another. Within this paradigm, the new European narrative that emphasizes reconciliation, forgiveness, and collective remembrance acts as a means to foster cross-national identities and replace old-fashioned ethno-national identities.

### Chapter III: Identity, Collective Memory and Strategic Culture

The chapter discusses how culture, identity, and collective memory influence states' strategic behavior. Previously neglected in international relations theories, the issue of identity has gained importance through constructivist theories, which emphasize the role of ideas and perceptions in shaping state behavior. The study of identity formation and historical memory helps us understand how nations perceive war and make strategic decisions. Past conflicts leave lasting legacies that shape a state's strategic thinking, and understanding how war memories are processed is crucial in deciphering states' attitudes and choices. In other words, the way states memorialize their war experiences provides insights into their current strategic thinking and can explain their military behavior and options in times of crisis.

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### Cross-References

- ▶ [Dynamic Intersection of Military and Society](#)
- ▶ [Humanities' Influence on Military Sciences](#)
- ▶ [Military and Popular Culture](#)
- ▶ [Social Sciences' Influence on Military Sciences](#)
- ▶ [Strategic Culture in the Military](#)
- ▶ [The War and Society School in Military History](#)
- ▶ [What is Military History?](#)

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# Intelligence in Military Missions: Between Theory and Practice

Sebastiaan Rietjens

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## Abstract

Intelligence is the primary mechanism that military organizations use to generate understanding and its main purpose is to provide information to decision-makers such as commanders that may help illuminate their decision options. This chapter assesses the role of intelligence in military missions, more specifically the counterinsurgency and stabilizations missions that took place in, for example, former Yugoslavia, Iraq, Afghanistan, and Mali.

The chapter starts by addressing the changing and increasingly complex nature of many of the conflicts from the 1990s onwards. It explores how this has influenced the use of intelligence and presents two distinct schools of thought. The first school of thought, referred to as Jominian intelligence, tries to unravel the operational environment in a systematic way and regards the intelligence challenges as a series of problems with definite solutions. The second school of thought, referred to as Clausewitzian intelligence, argues that the goal of intelligence is to assess uncertainty and reach a deliberate judgment.

The main body of the chapter then analyzes the intelligence process and identifies several of the main intelligence issues within military missions. The

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S. Rietjens (✉)  
Netherlands Defence Academy, Breda, The Netherlands



intelligence process starts with the direction phase in which policy makers, military commanders, or planners state their needs, often referred to as information requirements. Several issues complicate such direction, including (1) the comprehensive focus of many current military missions, (2) their abstract and ambiguous strategic objectives and expectations, and (3) the military's unfamiliarity with the area of operations.

In the second phase of the intelligence process, the necessary information is collected. In addition to consulting their archives and databases, military units often have a plethora of means, both technical and human, available to collect information. Cross-cultural competencies are of crucial importance, in particular, during the collection phase.

The third phase of the intelligence process, labeled processing, turns raw data into intelligence. During the processing phase, the data are analyzed in order to gain understanding or insight. This exceeds the registration of events, but includes understanding the meaning of these events as well as their importance.

The fourth and final phase is dissemination of intelligence. Here, the relationship between the producers and consumers of intelligence during military missions is explored. This includes the reasons why consumers sometimes do not fully accept the intelligence they receive.

The chapter concludes with an agenda for research on military intelligence. It calls, for example, for a more eclectic author base; multidisciplinary as well as comparative research; increased attention to oversight, ethics, and open source intelligence; and more emphasis on intelligence within the navy, special forces, and constabulary forces.

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### Keywords

Intelligence · Military · Direction · Collection · Processing · Dissemination

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## Introduction

Operations in Afghanistan and Iraq since 2001 have reminded us of the truism already offered by Sun Tzu and Clausewitz that military success requires deep understanding of the nature of the war, and the broader strategic and operational environment. As the UK Joint Doctrine Publication 04 – titled *Understanding* – argues, “understanding provides the context for the decision-making process which informs the application of national power. The purpose of understanding is to equip decision-makers at all levels with the insight and foresight required to make effective decisions as well as manage the associated risks and second and subsequent order effects” (UK MOD 2010, pp. 1–1). Many academic studies that were published as a reflection of the challenges encountered during the counterinsurgency and stabilization missions reflect this awareness and stress the importance of understanding (e.g., Gentry 2010; Shultz 2018).

Intelligence is the primary mechanism that military organizations use to generate understanding and its main purpose is to provide information to decision-makers such as commanders that may help illuminate their decision options (Johnson 2010). Following Lowenthal (2017, p. 11) intelligence is defined in this chapter as “the process by which specific types of information important to military organizations are requested, collected, analyzed and provided to commanders and decision makers at all levels, the product of that process, and the safeguarding of these processes and this information by counterintelligence activities and the carrying out of operations as requested by lawful authorities.”

This chapter assesses the role of intelligence in military missions, more specifically the counterinsurgency and stabilizations missions that took place in, for example, former Yugoslavia, Iraq, Afghanistan, and Mali. To do so the next section presents the changing nature of intelligence and the main schools of thought on intelligence. Section “[The Intelligence Process](#)” introduces the intelligence cycle and, by making use of this concept, identifies several of the main intelligence issues within military missions. Section “[A Research Agenda for Military Intelligence](#)” concludes the chapter. It outlines the academic study on intelligence in military organizations and identifies several main research gaps.

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## Changing Nature of Intelligence and Schools of Thought

From the 1990s onwards, the types of conflicts and therefore the operational environments in which military missions took place have significantly changed. Mary Kaldor (2012) refers to these conflicts as “new wars” that are characterized by violence of different combinations of state as well as nonstate actors, large-scale displacement of people, fragile or failing economic, political, and social institutions, random and systematic violence against noncombatants, and widespread lawlessness. Whereas conflicts before the 1990s often showed a clear demarcation between war, organized crime, and mass atrocity, this is far less so in *new wars*. Examples of these *new wars* are Syria, Afghanistan, Iraq, and Mali.

The changing nature of conflicts has also influenced the use of intelligence. During conventional inter-state conflicts intelligence was often regarded as a puzzle that could be solved (Treverton 2007). For example, during the Cold War American intelligence services focused on many of these puzzles such as: How many long-distance missiles did the Soviet Union have? Where are they positioned? What is their reach? And how accurate are they? Answering these questions enabled the American intelligence services to solve the puzzle and assess the Soviet threat.

Compared to the inter-state conflicts, most recent conflicts are far more complex. As a result of this, challenges with which the armed forces are confronted can no longer be regarded as puzzles. In an effort to elucidate the current challenges, Treverton (2007) describes them as complex mysteries. These challenges are ambiguous and fuzzy and lack proven knowledge and fixed standards to achieve the intended objectives. This resembles the definition of wicked problems (Rittel and Webber 1973). These wicked problems are not unique to military operations. Other

examples of such problems are the global financial crisis that struck the world as of 2008, global warming, acts of terrorism, and refugee streams.

In an effort to visualize the problems in Afghanistan, general Stanley McChrystal and his staff designed the diagram that is depicted in Fig. 1. This example illustrates the complex nature of current conflicts. Or as McChrystal remarked: “When we understand that slide, we’ll have won the war” (The Guardian 2010).

Within the intelligence literature, there are basically two distinct schools of thought how to deal with such levels of complexity. The first school is often referred to as Jominian intelligence, after the French strategist Antonie-Henri Baron de Jomini. This school of thought tries to unravel the operational environment in a systematic way and regards the intelligence challenges as a series of problems with definite solutions. Much in line with the diagram that McChrystal made on Afghanistan. This school often refers to intelligence as a science (see, e.g., Marrin 2012). Critics of this school point at the impossibility of incorporating all the relevant elements of the environment in an analysis (Galster 2015). And if one would succeed in this quest, this approach will result in a severe simplification of reality. This will then lead to solutions that do not meet the problems for which they are intended.

The second school of thought acknowledges these problems (Agrell and Treverton 2015). This school is named after the Prussian general and military theorist Carl von Clausewitz, who argued in his well-known publication *On War* that “war is in the realm of uncertainty; three quarters of the factors on which action in war is based are wrapped in a fog of greater or lesser uncertainty” (Von Clausewitz 1984, p. 101). As a result, he continued: “many intelligence reports in war are contradictory; even more are false, and most are uncertain . . . In short, most intelligence is false” (Von Clausewitz 1984, p. 117). The Clausewitzian school of thought thus argues that the goal of intelligence is to assess uncertainty and reach a deliberate judgment (Galster 2015). This school therefore regards intelligence as an art instead of a science.

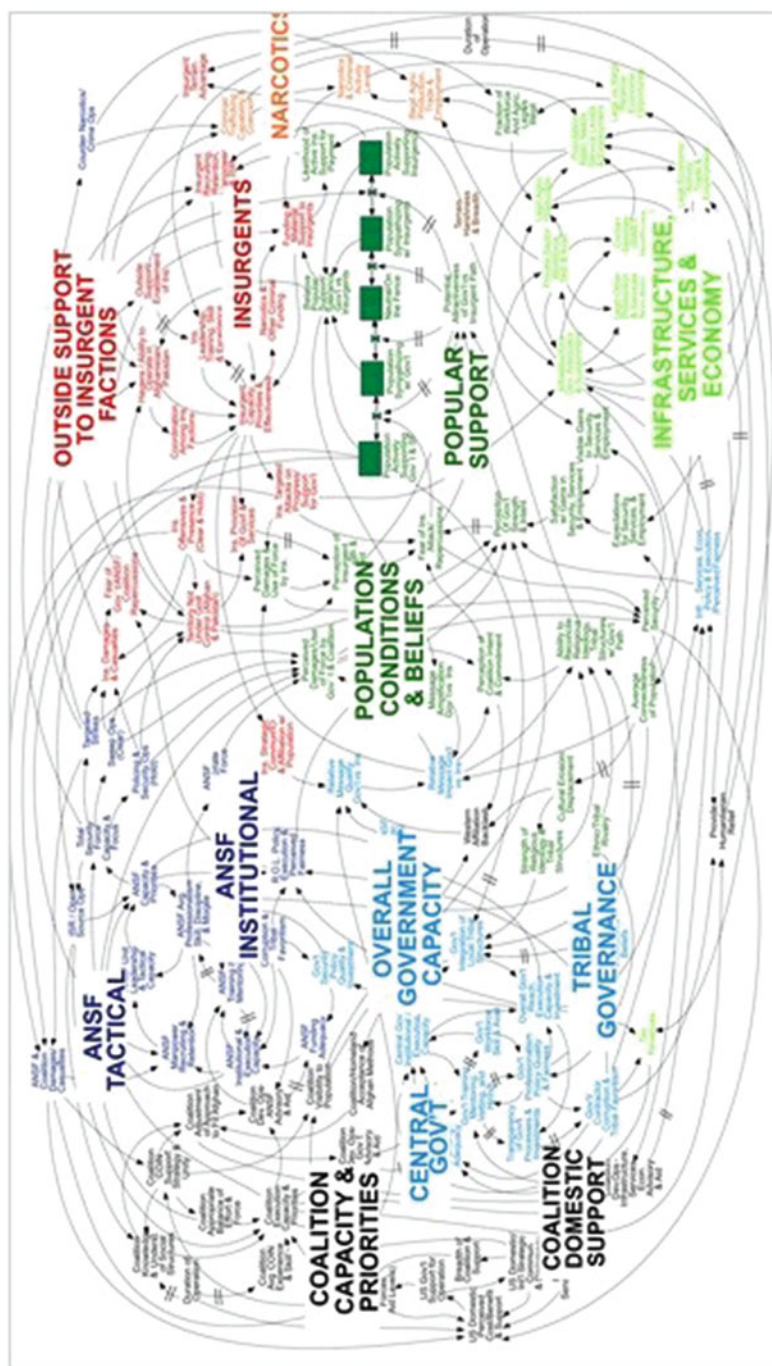
Table 1 summarizes the main differences between these two schools of thought.

Based on this background the next section zooms in on the process by which military organizations obtain intelligence during the recent stabilization and counter insurgency missions.

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## The Intelligence Process

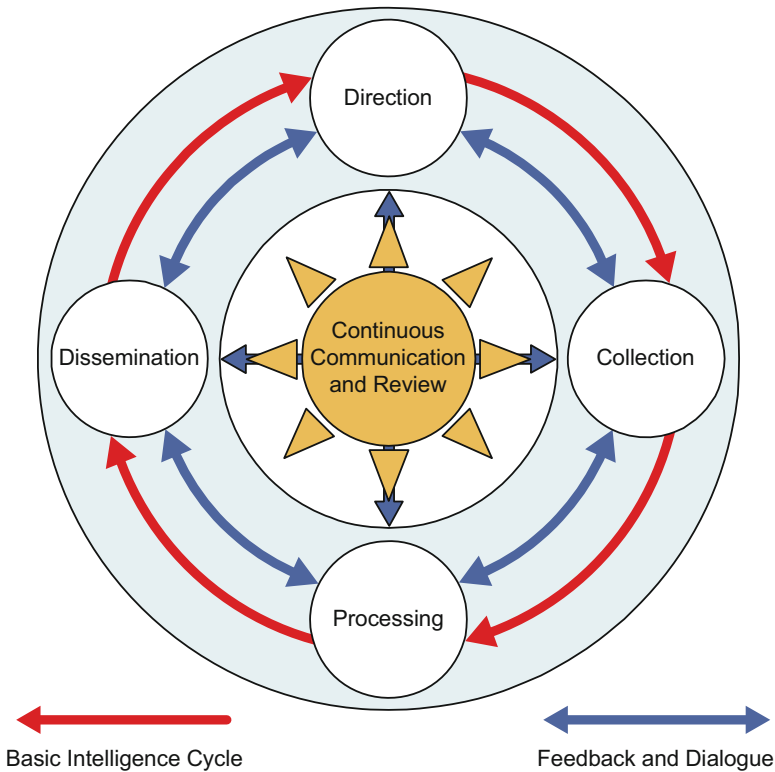
In general terms, the process by which a knowledge requirement is transformed into a policy advice is often described as the intelligence cycle. There are several varieties of this cycle depending on the number of phases one discerns. A further discussion on the differences and similarities of these varieties is outside the scope of this chapter. For this see, for example, Omand (2014). A well-known and often used version of the intelligence cycle is that of the British Army (see Fig. 2). This cycle discerns four main phases in the intelligence process: direction, collection, processing, and dissemination. The following sections address each of these phases in more detail and identify the main intelligence issues within military operations.



**Fig. 1** McChrystal's diagram on the complexity of the Afghan conflict (The Guardian 2010)

**Table 1** Jominian versus Clausewitzian intelligence (Agrell and Treverton 2015, p. 37)

Jominian intelligence	Clausewitzian intelligence
Goal is to eliminate uncertainty	Goal is to assess uncertainty
There is a “right” answer	“Fog of war” is inescapable
More information and better concepts narrow uncertainty	Single-point high-probability predictions both unhelpful and inaccurate
Large uncertainty indicates shortcomings to analysis	Better analysis may identify more possible outcomes



**Fig. 2** Intelligence cycle (UK Ministry of Defence 2011)

Empirical evidence from operations in Afghanistan, Mali, Syria, and Iraq is used to illustrate these main issues.

**Direction**

The first phase of the model is labeled *direction*. Here, policy makers, military commanders, or planners state their needs, often referred to as information

requirements. The information requirements can broadly be divided in three categories: information that contributes to (1) general situation awareness, (2) an ongoing operation, or (3) a future operation. All the separate intelligence requirements are then organized into a collection plan. Critics of the intelligence cycle (e.g., Hulnick 2006; Phythian 2014) argue that an initial knowledge requirement on the part of politicians, commanders, or military planners as the starting point of the intelligence cycle is debatable. In fact, often it is intelligence personnel that tell their masters what they think they should know more about. But even for them it is sometimes difficult to define adequate information requirements. For example, in case of so-called unknown unknowns (see, e.g., Rumsfeld 2002), it becomes by definition impossible to define information requirements.

Traditionally, information requirements in military missions have primarily emphasized the enemy (e.g., strength and disposition of enemy units, enemy morale), the weather conditions (e.g., weather forecast, conditions of surf and tide on the beaches), and the terrain (e.g., condition of roads, location of mine fields) (Glass and Davidson 1952).

Most recent military missions, however, take place in increasingly complex environments (see also section “[Changing Nature of Intelligence and Schools of Thought](#)”). Typically, many of these missions are not solely kinetic, but multi-dimensional in nature, having military, political, economic, and judicial aims (Koops et al. 2015, p. 613). As such, intelligence on merely security-related aspects does not suffice. Rather, military organizations need understanding on a broad range of issues, including but not limited to governance, socio-economic, and criminal challenges (Bruls and Dorn 2014). For example, NATO and Coalition of the Willing alliances during their missions in Afghanistan and Iraq learned that population-centric intelligence was essential to progress (e.g., Flynn et al. 2010; Kitzen 2012; Perugini 2008). As Flynn et al. stress:

The lesson of the last decade is that failing to understand the human dimension of conflict is too costly in lives, resources, and political will . . . a new [intelligence] concept should seek to explain how populations understand their reality, why they choose either to support or resist their governments, how they organize themselves socially and politically, and why and how their beliefs transform over time.

To address such comprehensive information requirements, NATO introduced the concept of PMESII. This implies that intelligence has to be obtained on different domains: Political, Military, Economic, Social, Infrastructure, and Information. A striking example within the economic domain is the production of poppy in Afghanistan. Poppy is the raw material for heroin and opium and around the year 2000, Afghanistan was responsible for approximately 90% of its production worldwide. ISAF forces soon realized that addressing the poppy production was essential in order to stabilize Afghanistan. Military troops thus got involved in destroying poppy fields as well as disrupting the drugs trade (Donkersloot et al. 2011). To do this, the troops needed to understand the complex drugs network and therefore gathered information on, for example, drug labs, traffickers, and drugs-related corruption.

Incorporating all PMESII domains in the intelligence gathering process is very much in line with the Jominian school of thought (see section “[Changing Nature of Intelligence and Schools of Thought](#)”). Although it might seem self-evident, this approach has severe disadvantages. Basically, military troops run the risk of developing a collection plan that includes many different information requirements and is therefore very broad in scope and lacks focus. Moreover, mapping all these different aspects consumes a great amount of time, energy, and financial resources. An intelligence officer of the MINUSMA troops in Mali formulated this as follows:

With the best of intentions ASIFU [i.e. the main intelligence unit within the MINUSMA force] created an intelligence collection plan of 75 pages that was not workable in any way. In their plan they deconstructed the entire Malian society along the lines of each of the PMESII [Political, Military, Economic, Social, Infrastructure and Information] factors and presented that as their information need, very much in line with the traditional intelligence officer sending a request saying “give me everything about...” (Rietjens and de Waard 2017, p. 540).

Directing the intelligence process is further complicated by the abstract and ambiguous strategic objectives and expectations that are inherent to many military missions. Looking at the different countries that contribute troops to a multinational military mission, one discerns a plethora of national objectives. In some cases, countries clearly formulate and communicate their objectives, while in other cases they do not express their objectives openly. The contribution of NATO countries in Afghanistan illustrates this well. Apart from the overarching mission to contribute to a safe and secure Afghanistan, countries aimed at countering terrorism, increasing their political influence by contributing troops (e.g., to be invited to the G20), sharing the burden of the international efforts or to avoid budget cuts in their home countries by deploying troops (Farrell et al. 2014). Each of these objectives led to different information requirements. It turned out difficult to align all the information requirements, in particular when countries did not openly express their objectives, which obscured the direction of the intelligence process.

A last issue complicating the direction of the intelligence process is the military’s unfamiliarity with the area of operations to which they are deployed. Most recent military missions take place in far-away countries that show little resemblance with the home countries of western soldiers. While most military agree that it is important to gain in-depth understanding of, for example, the root causes of a conflict as well as the political and social structures of a host nation, in practice they find it difficult to do so. There are at least three main reasons for this. First, predeployment training programs often emphasize the military skills and drills and pay only little attention to knowledge about the area of operation. Second, most military spend only a relatively short period in the mission area. Tours of 4 to 6 months are increasingly common and an often-heard complain is that just when people come to grips with the situation, they have to leave the mission area. This is devastating for the effectiveness of intelligence in military units. Third, when a political decision is made to send troops to a mission area, the military often has little time to prepare for their mission and gain upfront understanding of the environment in which they will operate. And as



soon as the troops are deployed, they are overwhelmed with day-to-day challenges and find it difficult to see the whole picture. As a result, they are often not able to adequately formulate the information requirements.

## Collection

In the second phase of the intelligence cycle, the necessary information is collected. In many cases, military commanders have a plethora of means available to collect information. Before tasking resources to collect the required information, the first step is often to consult the archives and databases to which the unit has access. In military operations, such databases include, for instance, information on key leaders, armed groups, settlements, and criminal activities. An example of a database that was widely used in Afghanistan was the so-called Afghanistan Country Stability Picture (ACSP) (Davids et al. 2011). This database contained information on approximately 85,000 reconstruction and development projects from all over the country. For each project, the database included several characteristics such as start date, costs, location, and under what pillar of the Afghanistan National Development Strategy the project was grouped (e.g., governance, infrastructure, or health and nutrition).

In practice using these databases comes with many challenges. There are many examples of databases that were largely unstructured or those that missed crucial data. And although there are many tools and software programs available to set up and manage databases, frequently they were developed and maintained by individual soldiers. This greatly hampered the continuity and sustainability when these soldiers left the mission area. Also, a lack of interoperability between different databases hampered military units in retrieving information (Rietjens and Baudet 2017).

When the required information is not available in the databases, military commanders have several different means available to collect the information. First of all, and following the US Army training slogan, *every soldier is a sensor*. “The slogan reflects the fact that every member of a deployed formation has a responsibility to collect intelligence as part of his or her duties. This includes reports from liaison officers, reports on official meetings and reports from routine duties (patrols, checkpoints, etc.)” (UK MOD 2011, pp. 3–14).

In addition to using the individual soldiers as sensors, military commanders can task one or multiple collection resources. Within intelligence studies, the following classification of the intelligence collection disciplines, often referred to as the INTs, is generally accepted:

- Geospatial intelligence (Geoint) refers to “the exploitation and analysis of imagery and geospatial information to describe, assess and visually depict physical features and geographically referenced activities on the earth” (Lowenthal and Clark 2016, p. 111). Examples of Geoint include satellite photos or video images from unmanned aerial vehicles (UAVs).



- Signals intelligence (Sigint) is intelligence-gathering by the interception of signals. These signals can originate from communications between people such as telephone and radio communications or from electronic emission devices not directly used in communication such as radar (Lowenthal and Clark 2016).
- Measurement and signature Intelligence (Masint) is “technically-derived intelligence that enables detection, location, tracking, identification and description of unique characteristics of fixed and dynamic target sources. Masint embodies a set of sub-disciplines that operate across the electromagnetic, acoustic and seismic spectrums, and material sciences. Masint capabilities include radar, laser, optical, infrared, acoustic, nuclear radiation, radio frequency, spectro-radiometric and seismic sensing systems as well as gas, liquid, and solid materials sampling and analysis” (Lowenthal and Clark 2016, p. 160).
- Human intelligence (Humint) refers to the collection of intelligence by human sources. Typical humint activities consist of interrogations (for an overview see Hassner 2019) and conversations with persons that have access to information. Humint is often associated with espionage or the clandestine acquisition of secrets by a human source (Lowenthal and Clark 2016). However, humint also includes the overt collection of intelligence such as by engaging with key leaders in a mission area.
- Open source intelligence (Osint) is the information that is publicly available to anyone through legal means. Osint includes a wide variety of sources including media (e.g., newspapers, magazines, television), public data (government reports, press conferences), and academic sources (e.g., conferences, scientific papers) (Lowenthal 2017).

In selecting and tasking the resources, the commander’s intelligence staff generally considers several factors. These include security (i.e., sources must be adequately protected), capability (i.e., the resource or unit must possess the appropriate sensor), weather and balance of tasking (i.e., an even distribution in workload between the different resources and units) (see, e.g., UK MOD 2011, pp. 3–15).

To illustrate this, one might think of the use of geospatial intelligence. A military commander could use different means to get such intelligence. These include satellites, helicopters, airplanes, or unmanned aerial vehicles. Each of these resources has different characteristics. In many of the recent stabilization operations, it was necessary to gather information on the daily pattern of life. That requires flying the same route at the same time daily, simply hovering over the area, and counting, for example, the amount of smoking chimneys. This makes unmanned aerial vehicles better equipped to the task as compared to the other collection resources as they can stay in the air for many hours, are easy to control, and are unlikely to be detected.

For many of the collection (and processing) activities during stabilization and counter insurgency missions, cross-cultural competencies are of crucial importance. These competencies are broadly defined as “the ability to quickly and accurately comprehend, then appropriately and effectively engage individuals from distinct cultural backgrounds to achieve the desired effect. (1) Despite not having an in-depth

knowledge of the other culture, and (2) Even though fundamental aspects of the other culture may contradict one's own taken-for-granted assumptions/deeply-held beliefs" (Selmeski 2007, p. 12).

Abbe and Halpin (2009) identify three main components that are necessary to acquire cross-cultural competence and therefore to effectively work in a foreign culture. The first component is cultural knowledge. Such knowledge begins with an awareness of one's own culture and includes an understanding of culture and cultural differences through schemata or frameworks. In many cases, military units were not sufficiently aware of the complexity of the conflict, the history of the area they operated in, as well as the ethnic sensitivities (e.g., Kitzen 2012). This negatively influenced their effectiveness, as they were not fully able to unravel the dynamics of the environment and address the information requirements they were tasked with. In response to this, many troop contributing countries started to embed cultural knowledge in the predeployment training of their troops. But this was often not sufficient.

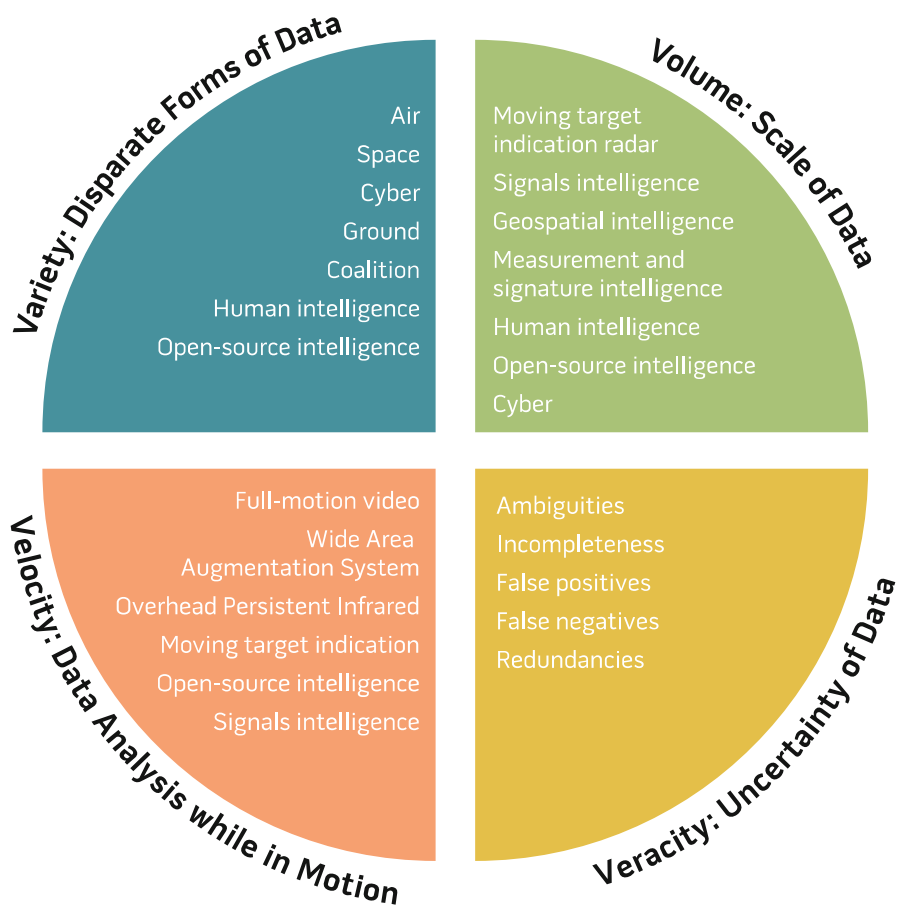
The second component of cross-cultural competencies is affect and includes attitudes toward other cultures and the motivation to learn about and engage with them. In this regard openness and empathy are of particular importance. The stereotypical images of soldiers wearing mirrored sunglasses when talking to local Afghans is a clear example of not having affect.

The third component of cross-cultural competencies is skills. These "encompass the ability to regulate one's own reactions in a cross-cultural setting, interpersonal skills, and the flexibility to assume the perspective of someone from a different culture" (Abbe and Halpin 2009, p. 24). As part of the latter, linguistic skills often play an important role in the collection process. In many cases, the authorities and population in the area of operation communicate in a language that the international troops do not master. In the case of Afghanistan, this includes Farsi, Pashto, or Dari, while in the Sahel Arab, Tamashek and dozens of other languages are spoken. Language inadequacy greatly hampers the collection and processing of literal intelligence through osint, humint, or sigint. To address this issue, military units widely use local as well as international interpreters. While they are able to compensate for part of the military's linguistic skills, military units are often unable to effectively deploying these interpreters (Van Dijk and Soeters 2008).

## Processing

The third phase of the intelligence cycle is labeled processing. Here, raw data are turned into intelligence. It is particularly during this phase that the changing character of the data is important. The most prominent data characteristics are often referred to as the 4 Vs of *Volume*, *Veracity*, *Velocity*, and *Variety*. Figure 3 illustrates these characteristics for military missions (Atwood 2015).

The V of volume (top right quadrant) refers to the continuously increasing amount of the data that needs to be processed. The technical intelligence collection disciplines – geospatial, signals, measurement, and signatures – have contributed most to this due to the highly sophisticated sensors that are employed on an array of



**Fig. 3** The four Vs (Atwood 2015)

platforms (Shultz 2018). The introduction of new technological platforms such as the F35, the MQ-9 Reaper, or the advancement of the soldier modernization program will only further increase the volume of data. This poses great challenges to the collecting and processing capacities of the organizations involved.

The V of veracity (lower right quadrant) refers to the uncertainty of the data. Data is often ambiguous, incomplete, or incorrect. Establishing the trustworthiness of the source and the data itself are therefore essential in this phase.

With regard to the third V of velocity (lower left quadrant), one observes an increase in data that is available in real-time such as videos made by unmanned aerial vehicles or social media feeds.

The fourth and final V refers to variety. Military have to cope with multiple data formats with structured as well as and unstructured data from, for example, text, image, multimedia content, audio, video, sensor data, or noise.

During the processing phase, the data are analyzed in order to gain understanding or insight. This exceeds the registration of events, but includes understanding the meaning of these events as well as their importance. For example, during stabilization missions, it might not be sufficient to know the disposition of the warring factions. To effectively operate, it might be crucial for military units to understand why these factions are in conflict, what allies they have and how the conflict impacts the local population.

Due to the increasing complexity of recent military missions, many intelligence staffs have deployed various different types of analysts. Examples include the traditional military analysts that emphasize the traditional information requirements that we have seen earlier (i.e., enemy, weather, terrain). Additionally, human terrain analysts are deployed to focus on the cultural, political, and economic factors of the local actors, whereas geospatial analysts are responsible for analyzing imagery that is developed by photographic and electronic means.

Despite these functional analytical specializations, gaining understanding is challenging and runs the risk of misinterpretations. In this respect, one distinguishes between an intelligence error and an intelligence failure. While intelligence errors are “factual inaccuracies in analysis resulting from poor or missing data. . . intelligence failures are systemic organizational surprise resulting from incorrect, missing, discarded, or inadequate hypotheses” (Johnston 2005, p. 6).

Intelligence errors frequently occur in the intelligence process. Paying extreme care to the validation of the data can help address this as well as collecting the information that is missing.

To reduce the chance for intelligence failures, the intelligence community has developed many different analytical techniques (Odom 2008). Heuer and Pherson (2011) provide an extensive overview of over 50 of them, which have become known as structured analytic techniques. These techniques include “Analysis of Competing Hypotheses,” “Delphi Method,” and “Scenario Analysis.” Analysts within military units apply these techniques to different degrees.

While most of the techniques work with qualitative data, Atwood (2015, p. 26) argues that:

The increase in sensors and resulting vast amounts of disparate data coupled with the increasing capabilities of IT systems to handle the deluge are transforming intelligence analysis. The traditional process of stitching together sparse data to derive conclusions is now evolving to a process of extracting conclusions from aggregation and distillation of big data.

There are several techniques that can help analysts understand, identify, and visually display key elements in these vast amounts of data such as key individuals, social relationships, patterns, and trends. Social network analysis (see, e.g., Waltz 2014) is a prominent example of such a technique. However, social network analysis as well as other similar techniques are highly mathematical. Since most analysts in military intelligence agencies or staffs do not have a computer science or mathematical background, they find these techniques difficult to adopt.

Likewise, social network analysis is ineffective without the specific domain knowledge that most analysts bring along. The main challenge is therefore to effectively combine quantitative and qualitative methods and techniques. Processing and analysis thus increasingly become a multidisciplinary challenge in which personnel, procedures, and information systems with different backgrounds have to be integrated or at least understand each other (see, e.g., Bang 2016).

## Dissemination

As General Alfred Gray, former commandant of the US Marine Corps, already stated: “Intelligence without communication is irrelevant” (Otte 2015, p. 41). To prevent this from happening, the final phase of the intelligence cycle, that is labeled dissemination, addresses the communication of intelligence to its consumers. The scholarly literature on the relation between the producer and consumer of intelligence is considerable (see, e.g., Marrin 2017; Lowenthal 2010), but the topic has been less studied during war and conflict (Gentry 2019).

In general, one observes that intelligence consumers such as decision-makers and military commanders have tight agendas and rarely have the time to read full reports. Effectively communicating the intelligence products is therefore extremely important. To do this, intelligence doctrine publications prescribe that a product needs to capture the essence of what is known or, to be more precise, thought to be known about a certain threat or opportunity. A product needs to be timely and actionable, that is, the assessment must be presented before the threat materializes and it must contain information that will help the leadership make up their mind about how to deal with it. At times these principles – timely and actionable – might get into conflict. Therefore, in urgent cases when time is at premium, “processing of information may not be possible and dissemination should be as quickly as possible, with the caveat that it is unprocessed and may not be reliable” (UK MOD 2011). Security is another main issue in disseminating an intelligence product. The classification of the intelligence product should reflect its content. Over-classification might cause delays in handling and transmission, while under-classification runs the risk to needlessly reveal the source of information.

There are several formats through which the assessments resulting from the processing phase are being communicated to the consumers. This includes a verbal, written, interactive, or graphic format. Overall the intelligence products should enable a commander to (US Army 2019):

- Plan operations and employ maneuver forces effectively
- Recognize potential courses of action
- Conduct mission preparation
- Employ effective tactics, techniques, and procedures
- Take appropriate security measures
- Focus information collection
- Conduct effective targeting

There are, however, many instances that consumers do not accept the intelligence they receive. This was already observed in 1966 when Sherman Kent, a foundational figure in the development of American intelligence analysis, stressed that “no matter how right we are and how convincing ... (policymakers) will upon occasion disregard the thrust of our findings” (Steury 1994, p. 34).

In his research on the relationship between intelligence producers and consumers, Wolfberg (2017) outlines several reasons why military commanders and decision-makers reject or distort intelligence. Cognitive biases – systematic errors in thinking that affect the decisions people make – play a central role in this process. There are many different cognitive biases. Wolfberg (2017) specifically points at one of them: the confirmation trap bias. This bias implies that one tends to look for confirmatory data to support one’s own beliefs when making a decision (Bazerman 2002). As a result, contradictory data are easily rejected. In addition, Wolfberg (2017, p. 461) argues that decision-makers and commanders “need confidence in order to shepherd their interests forward but intelligence can be too complicated and ambiguous, and therefore be rejected.”

At the level of national security, Marrin (2017) has identified several other reasons why consumers do not fully accept intelligence. These seem to be applicable to military commanders as well and include (1) consumers have their own information channels that are sometimes more up-to-date and accurate than the intelligence provided by the analyst, (2) intelligence analysis can increase uncertainty and complicates policy-making, and (3) consumers might bring more knowledge and experience with them than the intelligence analysts do, which might lead to a different assessment. But as the previous sections have indicated, intelligence products might also be misleading and contain wrong analyses and conclusions. Most consumers are aware of this, which leads them to handle intelligence products with an amount of skepticism.

Finally, when the commander does accept the assessment of the intelligence staff, it is important that there is an effective follow-up. This is often referred to as intelligence-driven operations (Norheim-Martinsen and Ravndal 2011) and means that operations are “driven in timing and objectives by intelligence, including operations to gain intelligence” (Dorn 2009, p. 806). Apart from a well-functioning intelligence process, the realization of such operations depends on the means that military commanders have. Although this might be obvious, commanders have scarce resources such as limited number of troops, inadequate counter IED protection measures, or limited transportation means. Such scarcity might restrict the commanders’ ability to carry out certain operations that are driven by intelligence assessments.

This completes the intelligence process. The next and last section will now focus on the academic research that is done on intelligence in military organizations and will identify several research gaps that might be a starting point for future studies.

## A Research Agenda for Military Intelligence

Although many practitioners, military and civilian alike, have emphasized the need for adequate intelligence in military organizations, only limited scholarly attention has been paid to the topic. As US professor of strategy and co-founder of the journal *Intelligence and National Security (INS)* Michael Handel (1990, p. 74) states “the most exhaustive military histories scarcely discuss the weighty contribution of intelligence activities.” The extensive military campaigns in, for example, former Yugoslavia, Iraq, and Afghanistan, do not seem to have changed this picture. In an overview of intelligence studies, Johnson (2014, p. 17) calculated that only 1% of all publications in the journal *INS* between 2006 and 2011 addressed military intelligence. In an effort to understand this lack of attention, Johnson argues that most scholars have emphasized intelligence at a strategic level and studied, for example, the role of intelligence in national decision councils. However, meanwhile governments spend much funding on intelligence in support to military operations to meet the information needs of troops at the tactical and operational levels. And whereas “journalists have become more adept at ‘embedding’ themselves into combat units for reporting on foreign conflicts; scholars have yet to adopt this methodology, which would provide first-hand observations of intelligence-at-work at the tactical level. Nor have scholars conducted many interviews with returned combatants to probe their intelligence experiences in the field” (Johnson 2014, p. 17).

To provide insight in the body of knowledge on intelligence in military organizations, Rietjens (2020) has carried out an extensive literature review of what has been published on this topic in academic and professional journals throughout the last 10 years. Below, some of the main findings are addressed.

First, the authors that study intelligence within military organizations show great uniformity. The great majority of them originate from the United States and United Kingdom; they are almost all male; most of them have a historical background or are military or intelligence professional; and most of the authors are civilian. Following Van Puyvelde and Curtis (2016, p. 1048) “a more eclectic author base, representing a host of cognitive styles and experiences, can enrich and deepen our understanding of intelligence organizations, processes and cultures.”

Second, the timeframe and conflicts on which the papers focus show a diverse picture. Much attention has been paid to the recent conflicts in Afghanistan and Iraq as well as to both World Wars. The period 1990–2001 is however highly under-researched. Considering the intense conflicts that occurred during the last decade of the twentieth century and the archives that slowly open up, there seem to be many opportunities to fill this gap the coming years.

Third, many of the publications emphasize collection, intelligence adaptation and reform, the nexus between intelligence and policy or command, intelligence cooperation, and analysis. Some topics, most notably oversight and ethics have, however, received only limited attention. Since military organizations often have wide-ranging mandates and are difficult to oversee, in particular during expeditionary operations, it is very important to pay closer scrutiny to both topics. And although collection as a whole attracted much attention, open source collection was not a popular topic. Since

this is a rapidly changing field, it is important that scholars step up their effort to study the role of open source intelligence in military organizations (see, e.g., Williams and Blum 2018).

Fourth, corresponding to the country of origin of the authors, the military organizations of the United States and the United Kingdom are by far the most popular research objects. As Richard Valcourt explains “scholars of intelligence benefit from knowledge of the services of a range of countries, compelling them to expand their horizons in terms of the types and range of issues they study. Failure to do so leads to severe gaps in understanding the true nature of the global intelligence community and its practitioners” (Van Puyvelde and Curtis 2016, p. 1041). Ideally, a wider scope should also lead to more comparative studies focusing on the similarities and differences between military organizations (Rietjens 2019). In so doing, Ruffa and Soeters (2014) provide methodological guidance on how to do structured comparative research using different national military operational styles. This could serve as an example for comparing intelligence within different military organizations.

Fifth, many of the publications are descriptive in nature and have ample theoretical foundation. This offers many opportunities to study the topic making use of the body of knowledge from other academic disciplines. Examples of such disciplines include interorganizational cooperation, information management, sensemaking, and complexity theory. Coulthart et al. (2019) offer great examples and inspiration for applying such multidisciplinary approaches to the intelligence studies domain.

Finally, the publications tend to address one specific service. While the air force and the army are studied intensively, other services receive less scholarly attention. There is thus great potential in studying cases of naval intelligence as well as those of the special and constabulary forces.

All in all, the insights of this review and the future pathways it identified should contribute to a greater and more conscious reflexivity of intelligence in military organizations and help to prepare for a turbulent and uncertain future. But as the much-acclaimed military historian John Keegan (2003, p. 349) puts it in perspective “foreknowledge is no protection against disaster . . . real-time intelligence is never enough. Only force finally counts.”

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# Military Leadership and Resilience

MAJ Danny Boga

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## Abstract

Military service exposes personnel to a variety of stressors and potentially traumatic events, ranging from combat through to common occupational demands found in any job. Military personnel frequently face demands such as extended time away from family and friends, exposure to ambiguous and potentially lethal situations, restrictions on personal freedoms, increased legal powers from supervisors, and the constant need to maintain “operational readiness.” The stressors faced during military service can have significant repercussions on operational effectiveness and force sustainment. How personnel respond to these demands while maintaining effective performance over time is often considered to be a matter of resilience. Resilience involves the ability to bounce back with minimal impact from adversity. Military leaders at all levels have become increasingly concerned about how the resilience of their personnel might impact or enhance operational capability. Commanders are increasingly recognizing the

M. D. Boga  
Australian Army, Canberra, ACT, Australia  
e-mail: [danny.boga@defence.gov.au](mailto:danny.boga@defence.gov.au)

important roles leadership and organizational support play in the development of resilience.

This chapter aims to provide a broad overview of some of the research, concepts, and practices being employed by modern militaries to foster resilience. It examines what is meant by resilience, then looks at how different concepts have been used at both individual and organizational levels to encourage greater resilience among military personnel. Overall, the development of resilience is a multifaceted process which leaders need to be aware of if they are to get the best out of their personnel. The promotion of adaptive “resilient” behaviors is particularly important in high-performance/high-stress organizations such as the military.

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**Keywords**

Resilience · Stress · Personality · Selection · Leadership · Job characteristics · Mental health · Training

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**Introduction**

Mental ill-health and the burden of mental disorders are increasing worldwide, disrupting lives and bringing an estimated cost to the global economy of US\$16 trillion between 2010 and 2030 (Patel et al. 2018). The economic costs of mental health problems are now estimated to be greater than those associated with chronic somatic diseases such as cancer and diabetes, and these costs are exponentially increasing (Trautmann et al. 2016). For example, the economic impact of mental health problems across the European Union in 2018 has been estimated at more than €600 billion, largely attributed to lost productivity and the cost of medical support (OECD/European Union 2018). Even when mental health issues are not severe enough to be labeled a “disorder,” the impacts on quality of life, productivity, motivation, and wellbeing can have serious repercussions on individuals and organizations (WHO 2007). Sustaining good mental health and reducing the impacts of workplace stress have become a growing concern for leaders, managers, and employees at all levels. Particularly in organizations such as the military where high-stress situations are common and the costs of mistakes can cause significant physical injury and political damage.

Unfortunately, stressors are practically unavoidable in our daily lives with the causes of stress inherent in just about every activity in which humans engage. It may be no surprise to learn that military personnel are more likely to be exposed to traumatic and stressful life events compared to civilians (Van Hooff et al. 2012), or that cumulative exposure to stressors and trauma promotes greater risk of mental disorders (Del Gaizo et al. 2011).

While there is a well-established link between exposure to combat and adverse outcomes such as post-traumatic stress disorder (PTSD) (e.g., Eekhout et al. 2015; Fear et al. 2010; Iversen et al. 2008), operational service is not the only source of

significant stress for members of the military. Military personnel are also exposed to the same life stressors found in civilian work settings (e.g., interpersonal conflict, family demands, daily commuting between work and home, etc.; Almeida 2005). “Routine” or non-warlike military service often exasperates these stressors beyond the levels commonly experienced in typical civilian settings. For example, military personnel frequently face demands such as extended time away from family and friends, unpredictable work hours (military culture traditionally holds that being a soldier is a 24 h a day, 7 days a week role), situationally ambiguous stressors (e.g., reactive/high urgency tasks), restrictions on personal freedoms, increased legal powers from supervisors, and the constant need to maintain “operational readiness” (Adler et al. 2004; Campbell and Nobel 2009). The impact of stressors on military effectiveness should not be understated, with diagnoses for mental health disorders being identified as the leading cause for hospitalization in the US Armed Forces (Armed Forces Health Surveillance Center 2012).

For these reasons, military commanders have become increasingly concerned with the development and maintenance of resilience within their forces. While it is natural to think of resilience as largely depended on the personal qualities of an individual, commanders are now recognizing that leadership and organizational support are also important to promoting resilience – not only at the individual level, but also at the team and organizational levels. (e.g., ADF COMD FORCOMD Directive 2015).

This chapter aims to provide a broad overview of some of the research, concepts, and practices being employed by modern militaries to foster resilience. It will start by examining what is meant by resilience, and then look at how different concepts have been used at both individual and organizational levels to encourage greater resilience among military personnel.

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## Understanding Stress

While stress is generally seen as something to manage through minimization or avoidance, this approach is not practical in high-performance or inherently contested environments such as the military. Furthermore, a certain amount of stress is required for competent performance to be achieved. Labeled the *Yerkes-Dodson principle*, performance can be demonstrated as following an inverted U shape, where performance will suffer if stress or arousal is either too high or too low (Yerkes and Dodson 1908). Both high and low stress can adversely impact mental health. When stress is deemed too high, physical complaints (e.g., headaches and illness, etc.) and mental health problems increase (commonly called “burnout”). Inversely, when stress is deemed too low, people experience reduced motivation and can often suffer increased anxiety or depression (Hesketh et al. 2019).

Modern warfare has been described by soldiers and commanders alike as “months of boredom punctuated by moments of extreme terror.” Thus, military personnel are often exposed to the extreme ends of both high and low stress. The capacity for military personnel to tolerate these shifts between boredom, sustained readiness, and

“terror” has often been attributed to personal resilience (Maddi 2007). But if resilience is important for military personnel, the next question is “what is resilience and can it be trained?”

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## What Is Resilience?

While the term “resilience” is used often in modern workplaces, many military commanders are still uncertain what resilience actually “is” (despite knowing that they want their personnel to have more of it). This uncertainty is understandable as there is no universal definition of resilience within the public vernacular or in the empirical literature of the last century (Aburn et al. 2015). To many, resilience is considered to be a static trait within an individual; however, this is a misconception. It is more accurate to think of resilience as a dynamic process, which changes over time and with context (Gartland et al. 2011). For example, a soldier might display sound resilience under the stress of operations, but cope poorly when dealing with romantic or interpersonal relationships. A person’s ability to cope with the same stressors can also change over time; that is, a person might manage a particular stressor adaptively one day, but poorly the next. There are many possible reasons for this variability. For example, prolonged stress may have a cumulative impact, or previously utilized support might become unavailable (e.g., increased time pressures, absent friends/family, and fatigue/illness).

So, what is resilience? Is it a personality trait, a trained ability, or a resource that needs to be managed? The simplest, yet unsatisfying, answer is that resilience is a product of all these things.

A review of the empirical literature on resilience conducted by Aburn et al. (2015), concluded that resilience relates to *adaption to adversity*, resulting in good mental health and ability to recover or bounce back. Furthermore, resilience was found to be a common attribute inherent in all people, rather than some unique or unusual characteristic held by a special few. Summarizing the plethora of literature on the subject, a generally accepted definition of resilience is *the capacity for an individual to adapt effectively to adversity and trauma with a short-term downturn in functioning and mental health* (Crane 2017; see also, Southwick et al. 2014). Therefore, resilience is less of a static individual characteristic, but rather an outcome predicted by the dynamic interplay between characteristics unique to each individual within a given situation. However, there are some characteristics which seem to promote more resilient outcomes across situations.

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## Personality and Resilience

How does personality contribute to resilient outcomes? One of the most well-known frameworks for conceptualizing personality is the five-factor model, which categorizes personality into five broad categories: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism (Costa and McRae 1992).

Authors Sinclair, Waitsman, Oliver, and Deese (2013) offer a comprehensive review of how different personality traits relate to resilience. To briefly summarize their work, evidence shows that people high in neuroticism (i.e., low emotional stability, moody, and emotionally sensitive to stimuli) are more likely to experience reduced mental health and stress-related disorders (Sinclair et al.). Whereas, higher trait levels of conscientiousness and extraversion have been linked to more positive emotions and favorable mental health outcomes.

Extending our knowledge on how personality links to resilience, Sinclair and Cheung (2017) reviewed several models of personality and identified five core themes commonly linked to resilience: *purpose* (the ability to find meaning in life events), *optimism* (the tendency to see negative events as situational rather than enduring), *willpower* (self-discipline and drive to succeed), *emotional stability* (poised under pressure), and *resourcefulness* (self-efficacy and intrinsic locus of control). Understanding how personality characteristics predict resilience is fundamental in selecting the right people for organizations like the military.

A leading researcher in the field of resilience in the military context, Bartone (1999) proposed that individuals high in a personality construct labeled “hardiness” experience fewer mental health problems under stress. Bartone identified three key characteristics displayed by highly hardy people: commitment, challenge, and control. *Commitment* involves looking at difficult experiences as interesting and useful; *challenge* relates to enjoying variety and seeing change/disruptions as interesting opportunities for personal growth; and *control* is a belief that one’s actions make a real difference in the results that follow. When working together these facets of hardiness create a mindset predictive of better health and higher performance across the lifespan, despite exposure to stressors (Stein and Bartone 2020). There have been several studies which have supported the idea that those high in hardiness are more likely to have better levels of mental and physical health (e.g., Bartone 1999; Britt et al. 2001; Dolan and Adler 2006). Hardiness has also been found to be a unique predictor of positive health outcomes distinct from those associated with the more common personality constructs such as the five-factor model (Eschleman et al. 2010; Skomorovsky and Sudom 2011).

While there is sound evidence to support the linking of personality factors to stress tolerance and subsequent resilience, this approach is not without contention. The central source of debate is that resilience has not been found to be a fixed or stable trait resulting in resilience across time and situations (unlike personality, which is a highly stable construct; Windle 2011). Furthermore, researchers caution that representing resilience as a product of personality implies that a person lacking these essential characteristics is condemned to failure (Windle). The personality-based focus on resilience has scientific merit, but imposes substantial barriers when viewed from a training perspective; for example, military members commonly self-identify as being resilient. As such, it can be hard to motivate personnel to invest in training that aims to develop something which they believe they already possess and is intangible except when facing significant adversity. From a clinical perspective, the idea of personality-based resilience has great relevance to therapy, but is often viewed as too individualistic for effective use in guiding group-based interventions



as individuals can have very different reasons for seeking to engage in or avoid different (potentially stressful) activities (Holtforth 2008).

Finally, although there is an extensive body of research demonstrating that aspects of personality offer a protective moderating effect against the detrimental effects of stress, the role personality plays in buffering stress is not completely clear. For example, it has been argued that hardiness may actually represent more of a motivational attitude toward how an individual engages with stressors rather than represent a true personality characteristic (Bartone 2012; Maddi 2007). Supporting this perspective, there is evidence that hardiness is itself mediated by motivation, with approach and avoidance motivation explaining much of the beneficial outcomes of hardiness onto mental health (Wang et al. 2019). From this perspective, many of the resilience-based effects of hardiness can be considered from a motivational perspective rather than a true personality construct. This highlights that motivation for service is an important personal quality when looking to establish a resilient organization, an important consideration for leaders and recruiters alike.

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## Resilience Through Selection

Understanding the personality and motivational underpinnings of resilience is an important consideration when assessing candidates for potential service in high-stress environments. For this reason, the first step for maintaining good mental health and developing resilience in the military comes from establishing good selection practices.

How well a person can perform their job plays an important role in predicting how effectively they will respond to the demands of military service. Accordingly, a common practice in military selection processes is to apply a person-job fit criterion. Job fit criteria is usually established based upon analysis of the demands and requirements of the job for which the candidate is being assessed, and commonly assessed in terms of facets such as intellectual ability, education, and job knowledge (Edwards 1991). This approach has been used in Western militaries for over a century, with militaries such as the UK, USA, and Australia initiating the use of cognitive ability testing for selection during World War I (e.g., Snow and Snell 1993). The aim of selection is to find people with the right combinations of abilities to meet the demands of training and then apply those skills under challenging and changing conditions.

While job competence contributes to reducing workplace stress, task-specific demands are not the sole source of stress within the military. Research has shown that performance over time, motivation, and wellbeing are more likely to be influenced by a person's organizational fit rather than just job skill (Kristof-Brown et al. 2005). Organisational fit relates to the alignment of personal/professional values, beliefs, and team orientation between an individual and the organization they work for. It has been found that a poor alignment between the person and their organization's values predicts reduced job satisfaction as well as declines in mental health (Roczniewska 2014).

In selection, militaries often focus on how well a potential recruit will “fit” within the military environment as opposed to their level of preexisting job knowledge or qualifications (Sørli et al. 2020; Johnston and Farley 2013). This is because the nature of military service is such that finding *ab initio* “job ready” recruits is all but impossible. As such, upon entry into the military, all new personnel can expect to undertake a range of intensive training programs to teach them the job knowledge and skills required to fulfill their specific roles. In this way, military selection can be considered as an assessment of “potential” rather than the more typical job fit assessments conducted by civilian employers. On the other hand, aspects relating to person-organizational fit, motivation, and “character” are far harder to train and therefore generally considered more important in potential military recruits than “job skills.” Good military candidates ideally possess the required cognitive ability, motivation, and personal characteristics predictive of meeting the demands of military service (e.g., low neuroticism, high hardiness, realistic expectations, mastery motivations, organizational fit, etc.). These attributes are important not only for building job competence, but provide the bases for resilience.

While understanding intrapersonal differences provides a sound place to start when seeking to establish an individual’s potential for resilience, more is required to turn good “potential” into highly resilient behaviors. The next step is to identify what resources are required to develop and maintain individual and organizational resilience. This becomes the domain of good leadership and organizational support.

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## Resilience as a Product of Leadership

Leaders are not only responsible for the planning and execution of missions. They also have direct responsibility for the wellbeing, morale, and motivation of their teams. No one likes working for a poor quality leader, but in the context of resilience, good leadership has tangible effects. For example, perceptions of good leadership, team cohesion, and high morale have been found to predict lower levels of self-reported PTSD symptoms from UK personnel returning from deployment in Afghanistan (Jones et al. 2012).

Militaries typically favor a “warrior” culture, which values ideals of physical and mental strength, stoicism under pressure, and an ability persist in the face of adversity. So, concerns among military personnel about being seen as “weak” or lacking the “mental fortitude” often result in hesitation or avoidance of proactive help-seeking behaviors (Hoge et al. 2004).

Leaders play a critical role in establishing a climate that supports military personnel to seek support in response to mental health problems. For example, Zinzow et al. (2013) conducted qualitative research with operationally deployed military personnel and found problems with leadership were frequently cited by soldiers as a concern that inhibited them from seeking support. Key issues identified included concerns that leaders were too busy with operational matters to recognize or support soldiers with their problems, concerns over a lack of confidentiality in how their personal issues would be handled, and uncertainty regarding how treatment

would impact their performance and ability to contribute to mission objectives. By contrast, Britt, Wright, and Moore (2012) found that when military leaders, where perceived to be fair, displayed an interest in their members' wellbeing, or an interest in seeing their subordinates getting mental health support, then soldiers reported fewer concerns regarding mental health stigma or ability to access support. These authors also found that the immediate supervisor (e.g., often non-commissioned officers) had a stronger effect on stigma and support-seeking behaviors than those higher up the chain of command (e.g., commanding officers).

Training to improve leaders' understanding of mental health and educating them in the promotion of mental health support has been found to be an effective means for promoting resilience; for example, a Canadian program, called the Mental Health Awareness Training (MHAT), was found to improve both leaders and staffs knowledge and attitudes toward supporting mental health, as well as demonstrated a reduction in the average duration of mental health claims by 27% in the nine-month period following the implementation of the program (Dimoff et al. 2016). The MHAT program itself represents a fairly brief intervention, consisting of a single 3-hour session focusing on educating leaders in the early identification, engagement, support, and monitoring of mental health and wellbeing in their staff. This demonstrates how much of an effect the attitudes of leaders can have on how personnel respond to mental health problems, and subsequently promoting improved resilience within their teams.

Further highlighting the importance of leadership buy-in for the effective application of military resilience training, is the "Special Operations Mental Agility Program" sponsored and run by Canadian Special Operations Command (CSOC). While quantifiable outcomes of this program have not been published, CSOC reports that the program has been well received by personnel across the command. Critically, CSOC and the program developers emphasize that the success of the program is based largely upon the co-facilitated delivery model involving a technical expert (i.e., sports psychologist/mental health specialist) and a respected member of the unit who brings relevant operational experience to the training (Mattie et al. 2017). The positive reputation and endorsement of the co-facilitating unit member has been identified as pivotal in creating buy-in to the program.

Leaders also play a key role in shaping how personnel respond directly to stressful situations. Research has found that the mindset (i.e., motivation, attitude, and beliefs) people hold toward stress is an important predictor of resilience. Specifically, when stressful situations are appraised as a threat, then negative effects such as avoidance and reduced mental health are more likely to occur. By contrast, if a situation is appraised as a challenge (i.e., opportunity for meaningful personal growth), then outcomes such as increased performance, persistence, and wellbeing are likely to occur in the face of adversity (Jamieson et al. 2018). Furthermore, the "stress as benefit" mindset appears to be open to external influence, with leaders and role models having an important role to play in encouraging "cognitive reappraisals" of stressors as nonthreatening and beneficial (Crane and Boga 2017; Jamieson et al.). Put simply, leaders who are adept at finding meaning in stressful situations, and are

effective in facilitating this mindset within their teams, are more likely to foster an adaptive mindset toward stress and thus encourage resilient outcomes.

In this context, it is a key leadership challenge to strike an appropriate balance between the values of perseverance and “grit” in the face of adversity (in which militaries pride themselves) and promoting a culture that encourages proactive mental health support to sustain good self-care and long-term operational effectiveness.

In summary, the attitude of the leader toward stress and mental health is a critical organizational element to fostering resilience. However, there is still more involved in providing the foundations of resilience. Leaders also need to understand how job demands create strain and what resources their personnel require in order to thrive.

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## Job Characteristics and Resilience

Every occupation has its own unique demands and stressors. The job demands-resource (JD-R) model offers a flexible approach to conceptualizing the workplace characteristics associated with job stress and allows for predictions to be made regarding staff burnout, commitment, and performance (Bakker and Demerouti 2007). The JD-R model proposes that factors associated with job stress can be classified into two general domains: *job demands* and *job resources*.

- *Job demands* refer to the physical, psychological, social, or organizational aspects of the job that require sustained physical, psychological, cognitive, and emotional effort. This effort is associated with certain physiological and/or psychological costs (e.g., adverse physical environment, performance demands, interpersonal conflict, etc.). While job demands are not by default a negative experience, they do represent a stressor, which needs to be met with the expenditure of energy and effort. If insufficient recovery time is available, previously manageable demands can become significant sources of stress.
- *Job resources* refer to those aspects of a job that directly contribute to the achievement of work goals and stimulate personal growth, learning, and development (e.g., quality leadership, autonomy, feedback, support, relevant equipment, etc.).

Fundamentally, job demands put an individual under pressure and job resources buffer the impact and help individuals in effectively responding to those pressures. If the job demands outweigh the job resources, then burnout and reduced commitment/performance is likely to be the result. Alternatively, if job resources exceed the demands, personnel are likely to become more engaged, happier, healthier, and more committed to their work. While it would be an oversimplification to simply tally up all the job demands and job resources in order to see which one outweighs the other (there are too many unique combinations of demands and resources for simple

comparisons to work), the JD-R model is a useful tool for identifying key demands and resources which in turn assists efforts to predict burnout, impaired morale, and performance issues within workplaces.

The JD-R model has been used within militaries as a framework to assist commanders in identifying potential issues within their command. For example, the “Profile of Unit Leadership Satisfaction and Effectiveness” (PULSE) survey is a unit-level climate survey which was developed collaboratively between the Australian and Canadian Forces in the mid-1990s and has since been refined into a standardized tool. The PULSE is a four-page questionnaire, which measures a range of human factors within a unit that can impact performance and has relevance to resilience. Key areas measured include: job stressors, perceived organizational support, leadership effectiveness, job satisfaction, work motivation, and communication.

The PULSE assists military psychologists to work with unit commanders in order to better understand the “perceived reality” of unit members and help identify and manage areas contributing to burnout or reduced motivation/morale. Understanding the climate and perceptions of “healthy” or “struggling” units allow commanders to take proactive steps to reinforce or enhance resilience at an organizational level. For example, many leaders feel the need to monitor their personnel closely to meet the expected performance demands, or engage in “micromanagement” under the mistaken belief that they are providing valued “mentoring”; however, outcomes from successive PULSE surveys underscore the perception that micromanagement is a significant job demand which directly undermines feelings of competency and autonomy (both important resources and motivational antecedents; Deci and Ryan 2000). Micromanagement and double standards represent some of the biggest criticisms leveled against leaders and can have significant negative impacts on the morale, motivation, and wellbeing. The JD-R model and unit climate surveys allow for issues like these to be identified and addressed.

In terms of job resources, the perceived cohesion, purpose, and morale within a unit can have significant effects on how closely an individual identifies with the group or unit they are working in. There is strong evidence that perceived job value and shared respect is just as important for individuals’ health and wellbeing as it is for productivity and performance (Steffens et al. 2017). Stated simply, when individuals feel valued and supported by their organization, they are more likely to respond better to organizational stressors and display long-term resilience. The JD-R model offers insights into how well units and subunits within the organization are meeting individuals’ needs in terms of job resources and alignment of values.

It almost goes without saying that it is important for commanders to be alert to the work demands within their units. However, work demands such as the impact of micromanagement are often harder to detect than more tangible demands such as workload and productivity requirements. The use of organizational climate surveys such as the PULSE represent a useful tool in a commander’s repertoire when aiming to identify and balance job demands and resources in order to achieve outcomes in long-term organizational resilience.

## Mental Health Support

Early intervention is critical for good mental health recovery, but many military members delay seeking support due to career concerns. It is not uncommon for personnel to adopt the idea that mental health issues can be hidden to avoid potential career ramifications or embarrassment. It follows then, that for effective mental health support and resilience to flourish within the military, there needs to be a strong trust developed between individual members, commanders, and mental health support services.

Some militaries employ commissioned psychology officers, who not only provide mental health services relating to counseling and critical incident mental health support, but also provide organization-level support in the form of direct advice to commanders on issues such as motivation, performance, human factors, fatigue/shift management, unit cohesion, and job suitability (Staal and Stephenson 2006). Military psychologists are also commonly engaged in research, psychoeducation, and support on topics ranging from pre/post-operational adjustments and stress management, through to specific tasks such as working with human remains or hostage recovery. In this way, military psychologists attempt to engage with commanders and service members at all levels with a view to proactively improving performance and resilience, rather than being seen solely as medical practitioners who only get involved once a member becomes a “patient.” This helps promote the mindset that positive mental health and psychology are proactive performance enhancers rather than reinforcing negative mental health stigmas where seeking psychological support is akin to injury or weakness (e.g., Crane and Boga 2017; Jamieson et al. 2018).

Several nations (e.g., Australia, Canada, the USA, and New Zealand) conduct mental health screening for military personnel returning home from deployments. The aim of these screens is to identify potential impairments in mental health and provide opportunities for brief interventions and/or psychoeducation to encourage adaptive behaviors, or to refer personnel for more comprehensive assessment and support (Searle et al. 2015). These screens also enable the large-scale collection of data to better understand and improve mental health support to operations. This organizational approach seeks to reinforce the message that command takes mental health seriously and allows for early interventions, for those most in need upon return from operations.

Building upon the responsibilities of leaders to make mental health support accessible, health specialists also need to build trust with both military members and commanders in order to overcome the barriers and stigma associated with mental illness. Many military personnel have deeply held concerns that even relatively “minor” mental health problems will result in perceptions that they are “damaged” or unreliable within their units. Accordingly, mental health intake, assessments, and treatment processes need to take into consideration not only the most ethical and effective treatment options available, but also potential issues of how different treatment options might affect operational readiness and career progression. While this observation may sound superficial (as effective treatment needs to be the

priority), research has shown that perceived damage to a military member's career poses a significant risk to long-term mental health and creates a substantial barrier to broader help-seeking behaviors during military service (Hoge et al. 2004; Van Hooff et al. 2018). For example, removing a soldier from a promotion course to undertake comprehensive treatment might be the best clinical option, but options that allow them to complete their course while accessing support should also be considered. If one soldier's career is perceived to be unfairly impacted by engaging in mental health support, there may be many more wondering if seeking support for themselves is worth the risk.

Unsurprisingly, increased exposure to combat is directly linked to increases in symptoms of combat stress and post-traumatic stress (Judkins and Bradley 2017). The delivery of brief psychological interventions promoting the resilience, recovery, and return to duty has become a foundation of operational psychology. While the management of combat stress within an operational environment is a multi-dimensional process, with mental health professionals working closely with serving members and command, the cumulative evidence shows that militaries that provide embedded psychological support reduce the prevalence of long-term disfunction and are more effective at maintaining an effective fighting force (Judkins and Bradley 2017).

By way of illustration, the US military identifies six key treatment principles for managing operational stress reactions (brevity, immediacy, contact, expectancy, proximity, and simplicity; or BICPES; Judkins and Bradley 2017). The Australian military uses a similar construct called PIES (proximity, immediacy, expectations, and simplicity). Other militaries have adopted similar models but the fundamental idea remains the same. Specifically, the aim is to manage military members experiencing stress reactions as close to their deployed location as possible. This keeps them connected with their team and helps maintain their operational mindset. Maintaining an individual's expectation that they will return to effective duty is critical to avoiding the development of a causality mindset (i.e., no longer operationally effective and thus returning home). The further a member is removed from their operational unit during treatment, the harder it becomes for them to return to operational duties (Judkins & Bradley). Early identification of issues and simple interventions are the most effective methods for promoting fast recovery from common mental injuries and strains. However, it is acknowledged that not all treatments can be delivered in this way. More serious stress reactions may necessitate withdrawal to rear-echelon areas or even return home for comprehensive treatment. Proactive resilience training is one means in which militaries endeavor to preserve operational capability through the reduction of psychological casualties.

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## **Resilience Training in the Military**

Stress inoculation training has traditionally formed around the idea that exposure to demanding stressors will inevitably lead to more resilient personnel. Unfortunately, experience without clear feedback and guidance is just as likely to build bad habits as good ones.



A key ingredient in effectively building resilience seems to be in exposing individuals to levels of stress sufficient for them to learn adaptive and beneficial lessons without pushing them to the point of injury or distress where learning becomes impaired. Ideally, training should challenge a person in a meaningful manner, while allowing for different approaches and skills to be trialed and reflected upon (Crane and Boga 2017). If training is overwhelming or beyond an individual's capacity, adaptive learning becomes impaired and the focus starts to shift from learning to survival. This can lead to an increase in long-term sensitivity/avoidance of stressors, the development of new mental health problems, or withdrawal from training/exit from the military. Furthermore, pushing people beyond their limits with the expectation that the exposure will inoculate them to stress risks promoting a culture in which a stoic response to stress is expected and any observable sign of weakness is discouraged, resulting in individuals choosing to hide mental health problems rather than seek support when required.

Militaries around the world have taken different approaches to developing resilience training. A commonly seen approach adopts a workshop format involving psychoeducation and the practice of cognitive skills for stress management. Such training often runs between a couple of hours and a couple of days. A classic example is the mental health training developed by the NATO Science and Technology Organization which teaches basic cognitive skills such as: acceptance and control, goal setting, self-talk, and tactical breathing in a 2-hour workshop. Variations of this program have been adopted by at least eleven militaries from NATO countries; although there have been few empirical validations conducted, there is evidence to suggest that these programs lead to better cognitive coping (e.g., less self-blame) and lowered short-term psychological distress in training (Bailey et al. 2011; Cohn and Pakenham 2008).

The following represents a small sample of programs used to illustrate different approaches to resilience training within the military forces.

*The Master Resilience Training (MRT)* is a ten-day program that aims at teaching resilience skills to non-commissioned officers (NCOs). This program forms a pillar of the US Army-led "Comprehensive Soldier and Family Fitness" (CSF2) program. Based on cognitive behavioral therapy (CBT), the curriculum centers on the "action-belief consequence model" proposed by Ellis (1962). This model holds that cognitions shape emotional and behavioral responses. The MRT is primarily intended as a *foundation* for training resilience skills, but it also aims to introduce resilience concepts that soldiers will encounter on deployments and across their career (Reivich et al. 2011). The program adopts a train-the-trainer approach, targeting NCOs with the intent that they lead and instruct junior soldiers in these skills. The purpose is to enhance soldiers' overall performance and wellbeing by increasing their ability to handle adversity and thereby prevent depression/anxiety. Training is delivered in a combination of large-group information sessions and small-group breakout sessions. Activities include role-plays, checks on learning, and experiential learning (e.g., group discussions and application exercises). The program builds on evidence-based protective factors that have been found to contribute to resilience. These factors include: optimism, effective problem-solving, flexibility, faith, self-regulation, relationships, and emotional awareness (Reivich et al. 2011).



In an evaluation of the MRT, Harms, Herian, Krasikove, Vanhove, and Lester (2013) found that the training decreased the diagnoses for mental health problems and substance abuse. However, the benefits were judged to be marginal, with only a small difference in subsequent diagnoses for mental health problems observed between the training and control groups (4.44% in the MRT sample compared to 5.07% in the non-MRT sample). These results suggest that CBT-based group training programs can have positive effects in reducing mental health problems – although the effect sizes were small. Still, although the effect size of the program was small, given the prevalence and costs of mental health problems, Harms et al. argue that even a small reduction in diagnosed mental health problems represents meaningful outcomes for individuals in larger populations, such as the US military. Furthermore, the cumulative effects from small effect sizes are not easily modeled and might result in large gains over time. Further study was called for to assess potential long-term effects.

One additional point of interest from Harms et al.'s (2013) validation was that when analyzed for mediating effects it was found that MRT had no direct effects onto diagnoses of mental health problems; rather the effects were completely mediated by improvements in soldier's self-reported *optimism* and *adaptability*. While more research is required to understand these results longitudinally, it provides some insight into what aspects of the MRT are providing the greatest benefits onto mental health. This knowledge has facilitated ongoing refinement of the resilience training program and informed the development of further resilience programs.

*Mental Fitness Training.* The mental fitness training developed by Macquarie University, in conjunction with the Australian Defense Force takes a distinctly different approach from more commonly applied psychological skill-building strategies. Psychological skill-building strategies are generally intended to teach stress management skills (e.g., tactical breathing, grounding, and progressive muscle relaxation). By contrast, the mental fitness training involves the application of a single metacognitive approach: coping and emotion regulatory self-reflection. The aim is to modify how personnel appraise stressors, encouraging a "stress as opportunity for self-growth" mindset. The training is designed to fit within preexisting military exercises and builds upon the adversity already inherent in military training. The program involves a 30-min introduction to the training and a self-reflection workbook to be completed periodically over the exercise period. The length of time between self-reflection can vary depending upon the intensity of training, but typically involves five 10-min periods of guided self-reflection conducted over 2–5 weeks.

Mental fitness training adopts a similar concept to physical fitness, where fitness is trainable, requires maintenance, and is often judged based on the demands of the environment (e.g., a "competition-fit" weightlifter is unlikely to be considered a "fit" marathon runner). Military personnel have generally been found to be more receptive to this practical/performance-orientated approach rather than less tangible ideas such as "training mental health." It also assists trainees to develop a personal identity of being "mentally fit" and reinforces the relevance of engaging in training to better adapt to changing environmental conditions (e.g., a soldier with optimum fitness on

operations may need to adjust their “training program” to become better “fitted” to the different demands of civilian life upon return home). At its core, the program frames stressors as opportunities for continual growth and offers a framework to develop personal training programs to progress toward established goals.

Five reflective practices are encouraged in the mental fitness training in order to strengthen resilience. These are: (a) awareness of one’s emotional, physical, behavioral, and cognitive responses to triggering events; (b) awareness of values and value-based goals in relation to the situation; (c) awareness of strategies applied to address the situation; (d) evaluation of strategy effectiveness in relation to values and goals; and (e) constructive adaptations of strategies to promote improvements in future strategies (Crane et al. 2019).

In 2017, a validation of the mental fitness training program was conducted with a class of officer cadets completing a particularly demanding part of their initial training at the Australian Royal Military Collage (involving field/tactical skills and leadership under adversity). Half the cadet class received the mental fitness training and the remainder attended an established psychological-skills-building resilience workshop. Data collected at the immediate conclusion of the field exercise demonstrated that there were no significant differences in depressive and anxiety symptoms between the two programs. However, over the next three months, anxiety and depressive symptoms continued to climb in the psychological skills group, whereas cadets who completed the mental fitness training demonstrated a significant reduction in depressive symptoms and perceived frequency of stressors. On average, at the three-month follow-up, cadets in the mental fitness program demonstrated symptom reductions of greater than >20% on all primary outcome measures (i.e., depression, anxiety, and perceived frequency of stressors) compared to those who received the psychological skills training. Most notably, the level of reported anxiety symptoms in the mental fitness group had practically returned to baseline levels (Crane et al. 2019). Thus, the mental fitness program was found to facilitate a speedy return to normal functioning post-adversity (representing the concept of resilience) rather than just buffing immediate stressors. Comparatively, the CBT-based psychological skills program provided similar short-term stress-buffering effects, but was not found to promote post-adversity recovery.

*Experiential Leadership Development Activities (ELDA).* Since 2007, the New Zealand Army has incorporated outdoor ELDA in support of their Army leadership framework to train and develop leaders. Since 2012, many New Zealand soldiers have been required to complete ELDA training as part of their promotion courses. ELDA are outdoor activities, ranging between 6 days (for level 1) and 12 days (for level 2 training), which utilize challenging activities such as rock climbing, whitewater kayaking, mountaineering, or ski touring as the medium for personal development. The aim of the ELDA program is to challenge students every day, then allow periods of self-reflection and group discussion to encourage students to assess their own performance with respect to motivation, confidence, and skill. From these experiences, participants generate personalized self-development strategies. The level 2 course extends the training to include tools to help students better understand discrepancies between their personal identity and how they are

perceived by others. The goal is to help students develop strategies which will enable them to better utilize their strengths and mitigate their weakness as leaders, particularly under periods of adversity.

Since 2012, ELDA training has become more focused on understanding personality and leadership and less concerned with performance under pressure or resilience. However, validation studies have found that students were more likely to demonstrate positive thinking and understanding or consideration of others when dealing with challenging situations, with positive behavioural changes being evident for an average of 4 months post-training without active reinforcement (Rhodes 2012). The evaluation of the training also notes that the more challenging and militarily relevant the course is, the more frequently positive workplace changes were observed. Furthermore, courses were found to be enhanced when they included inbuilt reminders to encourage ongoing self-reflection post-course, with the intent to recognize a broad range of immediately applicable personal strategies to respond to demands.

Overall, the accumulated research suggests that psychological stress management skills are able to be trained and inhibit some of the negative effects of stressors; however, resilience training goes beyond just buffering stressors. Adaption, recovery, and long-term resilience require changing the way people interpret and interact with stressors. Resilience training should not be considered a “one-shot” or annual inoculation, but needs to be actively incorporated into routine training and military life if it is to be maximally effective.

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## Summary

Resilience involves the ability to bounce back with minimal impact from adversity. Resilience is developed within military organizations through good selection and training practices that build upon the personal strengths of military members. Leaders have an important role to play in encouraging resilient outcomes. The attitude that leaders hold toward stress (in general) and mental health support (specifically) has a significant impact on whether or not individuals will engage in adaptive or maladaptive behaviors when faced with adversity. At the unit level, commanders need to display a genuine desire to see their members thrive. How a commander manages morale, work demands, and resources plays an important role in the long-term resilience of military members under their authority. At the broadest level, understanding barriers to care and effective integration between command and mental health support practitioners is fundamental for achieving resilient outcomes. Finally, there are notable benefits from the conduct of bespoke resilience training, but there is no single solution to building resilience. All the pieces need to fit together and reinforce each other to get the best results.

In closing, given the complexities and demands of military service, the promotion of resilience requires a whole of organization approach, sharing the responsibility between individual members, leaders, commanders, and support agencies.

## Cross-References

- Leadership in Extremis
- Military Leader and Leadership Development
- Military Organizational Learning
- Military Personnel
- Military Training, Education, and Socialization
- Recruitment and Retention
- What is Military Leadership?

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# Character Strengths and Its Utility for Military Leadership: A View from Positive Psychology

Alejandro César Cosentino and Alejandro Castro Solano

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## Abstract

Positive individual traits have been considered important by both Eastern and Western cultures. According to military academy manuals, the positive traits of individuals are significant elements for people who will hold military leadership positions. Since the dawn of the twenty-first century, positive psychology has had

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A. C. Cosentino (✉)

Colegio Militar de la Nación [Military College of the Nation], Centro de Investigaciones Sociales y Humanas para la Defensa (CISOHDEF) [Center for Social and Human Research for Defence], Facultad del Ejército [Faculty of Army], Universidad de la Defensa Nacional [National Defence University], Buenos Aires, Argentina

Facultad de Ciencias Sociales [Faculty of Social Sciences], Departamento de Psicología [Department of Psychology], Universidad de Palermo, Buenos Aires, Argentina  
e-mail: [acosen3@palermo.edu](mailto:acosen3@palermo.edu)

A. C. Solano

Facultad de Ciencias Sociales [Faculty of Social Sciences], Departamento de Psicología [Department of Psychology], Universidad de Palermo, Buenos Aires, Argentina

Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET) [National Council of Scientific and Technics Research], Buenos Aires, Argentina



a positive trait classification of six virtues that include a total of 24 character strengths originating from the proposals of Peterson and Seligman. Because character strengths can be assessed using reliable and valid measurement instruments, several empirical investigations have been carried out in military populations in the American and European continents. The studies conducted on the 24 character strengths have been mostly on cadets. The results of these studies have shown that character strengths are related to the military population. Thus, the relationship between the 24 character strengths and several points of interest, such as membership in military academic institutions, cadets' family of origin, and academic and military performance, among other findings, have been empirically studied.

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**Keywords**

Positive psychology · Personality · Military psychology · Military training · College academic achievement

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**Introduction**

In contemporary times, encountering the terms virtue or character in academic psychological discourse may seem dissonant or exasperating (McCullough & Snyder, 2000). These terms may also evoke a Victorian or Puritanical resonance to many psychologists in the present time. However, character has been an aspect of psychology studies and proposals since the dawn of the twentieth century, although its evolution as a subject of psychology has not been linear, but intricate. In fact, character almost disappeared as a relevant topic of study in psychology. However, the study of morally valued traits has re-emerged with much strength since the beginning of the present century (McCullough & Snyder, 2000). As is almost always the case, we have not reached this situation by chance.

In the first decades of the twentieth century, before the beginning of World War II, Psychology was concerned with three important missions: to make people's lives more satisfying and productive, to identify and develop talent, and to treat mental illnesses (Seligman, 2002).

However, in the development of psychology, there was a plain intention to exclude character-related terms from the lexicon of scientific psychology. There is a consensus among scholars that it was Gordon W. Allport who played a key role in the exclusion of character from psychology (e.g., Cawley III et al., 2000; McCullough & Snyder, 2000; Nicholson, 1998; Peterson & Seligman, 2004). Allport was a renowned personality trait theorist in the United States in the last century (Peterson & Seligman, 2004). He was among the intellectuals who stressed that the terms character and personality should be differentiated in psychology (Allport, 1921), but he went further. Allport not only negatively judged the indiscriminate use that psychologists made of character as equivalent to personality at the beginning of the last century (Barenbaum & Winter, 2008) but also strongly opposed

the use of the term character in psychology (Allport & Vernon, 1930). Allport argued that character was a moral category that referred to oneself from an ethical perspective, whereas personality referred to oneself objectively (Nicholson, 1998). Therefore, he considered that the term character should be deliberately eliminated from the psychological field as a construct because it is a purely evaluative concept and that the study of character should not be included in the field of psychology. Allport's vehement opposition to the study of character reflected, in part, the spirit of social change in the United States (Nicholson, 1998). Thus, by the 1940s, the progress of the personality framework in Psychology had become clear (Nicholson, 1998). Besides, if 1937 is considered the year of birth of personality psychology, it could also mark the beginning of the eclipse of character in psychology.

At the end of World War II, psychology became a science oriented almost solely towards the treatment of mental illnesses, and therefore, the theories, treatments, and prevention of psychological disorders marked the direction of research in the following decades (Peterson & Seligman, 2004). This approach led to essential progress in psychopathology, as evidenced by the emergence of effective treatments for more than a dozen mental disorders that had been untreatable only a few decades before. However, the other fundamental missions of psychology were almost completely neglected.

Although for decades character had not been a central theme in psychology, some psychologists within different traditions expressed themselves directly and indirectly on the positive personal characteristics or strengths of people's character (Peterson & Seligman, 2004) as follows: Erikson proposed that positive personal characteristics resulted from the successful resolution of psychosocial stages; Maslow described positive personal characteristics as central aspects in the self-actualization of individuals; Greenberger postulated that several dimensions of the psychosocial maturity model are positive characteristics or traits; Jahoda argued that the processes producing positive mental health involve positive characteristics; Kohlberg described the stage development of moral reasoning; and Vaillant put forward the benefits of mature defense mechanisms. The works of these theorists and several others involved in their theoretical approaches to the positive personal aspects – such as Ryff, Schwartz, Cawley, Gardner, and authors of *Evolutionary Psychology* and *Personality Psychology* – as well as studies on resilience were important for the subsequent development of the study of character in positive psychology.

By the end of the twentieth century, psychology had changed its course (Linley et al., 2006). Psychologists founded positive psychology, an area within Scientific Psychology that focuses on the positive aspects of people's lives: positive emotions, positive traits of people, and the institutions that foster the positive aspects of people. Thus, this area seeks to investigate with a scientific method the complete picture of psychological life, not only psychopathology (Seligman & Csikszentmihalyi, 2000). Seligman (2002) has argued that the message of positive psychology is to return to the origins of psychology and to consider that psychology is not only the study of illness, harm, and weakness but also the study of strengths and virtues that enhance people's quality of life.

The dawn of positive psychology is Martin E. P. Seligman's presidential address to the American Psychological Association in 1998 (Linley et al., 2006). In that speech, Seligman, as president of this association, proposed using the quality of scientific research to reorient psychological science and practice toward the development of a new science of human strengths, in order to identify and understand the traits and foundations of psychological health, and learn how to develop positive traits in young people (American Psychological Association, 1999; Linley et al., 2006).

Positive psychology is an area of study composed of three pillars of research: the subjective, individual, and group pillars. The subjective pillar of positive psychology studies the positively valued individual subjective experiences, such as pleasure and happiness (oriented to the present), hope and optimism (oriented to the future), and well-being and satisfaction (oriented to the past). In the individual pillar, psychologists study the positive individual traits, such as the capacity to love, courage, interpersonal skills, aesthetic sensitivity, persistence, clemency, spirituality, and wisdom; in short, these are the virtues and strengths of character. Finally, in the group pillar, psychologists investigate human groups linked to the positive aspects of individuals. For example, they study institutions that encourage individuals to be better citizens (Carr, 2004; Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000).

This chapter focuses on the pillar of positive psychology that studies character. Character is the morally valued aspects of the individual (Park & Peterson, 2009). In this sense, Park and Peterson have argued that the area that deals with the study of character is in a position of preeminence regarding the other two areas of positive psychology, the subjective and the group pillars. On the one hand, positive traits are the underpinning of positive subjective experiences, which come and go, such as positive emotions; and positive institutions, such as positive families, schools, and communities, are primarily positive because they comprise people with positive traits.

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## Character Strengths

Positive psychology not only recognizes morally valued traits as an important element for the characterization of good psychological functioning but also regards the study of character as a pillar or area of positive psychology (Seligman & Csikszentmihalyi, 2000). The first outstanding results of the study of character in positive psychology are the works developed under the auspices of the Values in Action Institute created by the Manuel D. and Rhoda Mayerson Foundation in 2000, a non-profit organization whose objectives are the development of scientific knowledge of human strengths and the development of positive traits in youth (Peterson, 2006; Peterson & Seligman, 2004). This institution focuses its work on good character, considering the concerns of American society (Hunter, 2001). The research topics of the Values in Action institute are associated with determining

what good character is and how it can be measured from the perspective of scientific psychology.

The availability at the beginning of the twenty-first century of two widely recognized and accepted classifications of mental disorders, known as the (American Psychiatric Association, 2000) *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; DSM-IV-TR) and the (World Health Organization, 1992) Chap. 5 of the *International Classification of Diseases* (10th ed.; ICD-10) is part of the remarkable progress in psychopathology in the last decades. Similarly, it was important to have a classification of psychological health or human excellence of the same quality as that of the psychopathological classifications. However, at the beginning of this century, there was no broad and detailed classification of positive traits that would provide an elaborate and widely agreed-upon framework, empirically grounded and serving as the support of research, diagnosis, and interventions in positive psychology because of the scant attention that Psychology had given to the positive aspects of the lives of individuals in recent decades (Dahlsgaard et al., 2005; Peterson & Seligman, 2004). However, the work carried out under the support of the Values in Action Institute was a significant initial step towards achieving a classification with these characteristics. In the first decade of this century, a handbook was published on character virtues and strengths, the so-called *Manual of the Sanities*, which develops a broad and meticulous classification of positive traits (Peterson & Seligman, 2004).

## The Values in Action Character Classification

The initial steps in achieving the goal of developing the Values in Action (VIA) character classification involved resolving fundamental issues about good character, such as specifications about definitions and forms of classification (Peterson, 2006). The four fundamental issues that were the subject of analysis are shown below.

- a) Theorists considered good character as a family of positive dispositions, such as kindness, hope, courage, and wisdom (Peterson, 2006). In addition, they decided to name the components of good character as character strengths. They assumed character strengths were, in principle, different from each other, and that people could have a high level of one character strength, while exhibiting a low or medium level of other strengths. They supposed character strengths to be a trait-like characteristic, in the sense of being individual differences with some stability and generality. However, these traits were not assumed to be fixed or grounded in immutable biogenetic characteristics. Also, to agree with a general premise of positive psychology, which stated that strengths imply more than the mere absence of distress and disorder (Seligman & Peterson, 2003), good character was assumed to be more than the negation or minimization of bad character. Finally, character strengths should be individually defined and assessed.
- b) They assumed that human excellence was as authentic, i.e., as “real” or as “true,” as disease (Peterson, 2006) and that character truly exists. Determining which character strengths or positive traits were culturally affected became a question to

be resolved empirically. Some character strengths might only be considered in some cultures, but not in others. However, the possibility that some values and virtues are universal was also to be taken seriously. Therefore, the answers given about good living and morally good behavior in Eastern and Western religious and philosophical traditions that have had a lasting and clear impact on human civilization were examined. As a result, six virtues were explicitly or implicitly reiterated in most of these philosophical and religious traditions: courage, justice, humanity, temperance, wisdom, and transcendence. This convergence was the foundation of the VIA classification of character. In this way, the theorists expected to avoid historical or cultural bias in the classification of positive traits (Dahlsgaard et al., 2005).

- c) No previous psychological or philosophical theory of good character was used as an explicit framework for the classification that the researchers would develop (Peterson, 2006). Nor was any alternative theory proposed to provide the explanatory framework for the new classification. The positive trait classification does not constitute a taxonomy in the sense that no theory explains the relationships between instances of the classification (Peterson & Seligman, 2004).
- d) Finally, the fourth central issue to be resolved was how much detail would the classification of positive traits require (Peterson, 2006). The identification of the six core virtues suggested that one could opt for only six entries in the classification. However, the virtues appeared to be too abstract to be measured. Each of the core virtues consistently defined a related set of character strengths. For example, the virtue of humanity might include the character strengths love and kindness; despite a certain degree of conceptual overlap between them – in this case, it would be difficult to think that someone could have one and completely lack the other – the distinction was important and workable. They decided to use the strength level of classification – not the virtues – since it was assumed that the “natural concepts” used by individuals to describe good character were at the level of character strengths and not at the level of the nuclear virtues. Finally, the existence of a large variety and amount of literature dealing with character strengths could profitably be used to generate classification entries.

## Characteristics of Character Strengths

After a group of scholars had taken a position on the four preliminary themes, they proposed a list of candidate character strengths for the classification, which was refined through a series of discussions (Peterson & Seligman, 2004). They also considered several sources related to good character, such as psychology courses, organizational studies, character education programs, and works in psychiatry, philosophy, and religion. Besides, they examined cultural objects, such as popular song lyrics, greeting cards, obituaries, and personal ads in newspapers, in search of character strengths; thus, the list of strengths was based on a broad exploration. They then filtered dozens of candidate strengths, combining redundancies, and 12 criteria (Peterson, 2006; Peterson & Seligman, 2004) were applied to each strength to be

included in the final ranking as detailed below: being widely recognized across different cultures; contributing to fulfillment, satisfaction, and happiness; being morally valued in one's own right and not for its tangible results; elevating others and not diminishing them, and producing admiration rather than envy or jealousy; having negative antonyms; manifesting itself in thoughts, feelings, and/or actions; and, as a trait, having some generalizability across situations and stability over time; having been successfully measured as an individual difference in previous research; not being conceptually or empirically redundant with other strengths in the classification; being widely present in some individuals, who can be consensually considered exemplary models; being precociously present in children or young people, who could be prodigies; being completely absent in certain individuals; and having institutions with associated rituals that deliberately aim to cultivate the strength and sustain its practice. After analyzing whether each proposed strength met these criteria, the VIA classification of six virtues including 24 strengths was developed (Peterson & Seligman, 2004), as described in the next section.

## The VIA Classification

Peterson and Seligman's (2004) VIA character classification includes the following six virtues, with the types of strengths enclosed in dashes: wisdom and knowledge – cognitive strengths that involve the acquisition and use of knowledge; courage – emotional strengths that involve exerting willpower to achieve goals in the face of external or internal opposition; humanity – interpersonal strengths that involve helping and being a friend to others; justice – civic strengths that underlie healthy community life; temperance – strengths that protect against excesses; and transcendence – strengths that forge connections to something greater than oneself, in a broad sense, and give meaning to life. It should be noted that Peterson and Seligman (2004) stated that VIA classification was tentative in nature and could be altered because of progress in the scientific study of moral excellence, so that in the future the clustering of character strengths could be revised, expanded, or contracted (Peterson, 2006). Table 1 shows the VIA classification with summary definitions for each of the character strengths.

## The Structure of Character

Peterson and Seligman (2004) explained that the approach they used for the study of character was inspired by personality psychology, which recognizes individual differences that are stable and general, but also shaped by the individual's contexts and susceptible to change. They proposed that character traits, by definition, are stable but malleable and that contextual and situational conditions, both physical and social environments, could facilitate or impair the onset or development of character strengths and virtues. For example, culture, religion, or political persuasion may be counted among the contextual factors that could influence character (Park, 2004).

**Table 1** Summary definitions of the character strength from Peterson and Seligman's (2004) VIA classification of 24 character strengths into six virtues

Wisdom and knowledge
Creativity. Having original and useful ideas
Curiosity. Lively desire to experiment and to know
Open-mindedness. Seeking alternative visions
Love of learning. Seeking more and better knowledge
Perspective. High and deep judgment about life
Courage
Bravery. Taking risks for doing the right thing
Persistence. Completing tasks, despite obstacles
Integrity. Practicing what one preaches
Vitality. Feeling alive and effective
Humanity
Love. Seeking to be close to one's affections
Kindness. Helping all, without utilitarian ends
Social intelligence. Knowing what others want and are looking for
Justice
Citizenship. Commitment to the social group
Fairness. Making fair social judgments
Leadership. Guiding the group in harmony toward success
Temperance
Forgiveness and mercy. Becoming benevolent towards transgressors
Humility and modesty. Letting one's own achievements speak for one
Prudence. Deciding carefully
Self-regulation. Governing one's responses to stimuli
Transcendence
Appreciation. Being moved by the excellence of things
Gratitude. Feeling and expressing gratitude
Hope. Being convinced that everything will be fine
Humor. Joyful and serene vision of life
Spirituality. Life has a meaning beyond oneself

*Note.* Appreciation = Appreciation of beauty and excellence

Peterson and Seligman (2004) argued that one must discriminate between talents and skills, and virtues and character strengths. Talents and skills seem more innate, more immutable, and less voluntary than positive traits, and while talents and skills may be considered strengths, they are not moral strengths. Moreover, unlike positive traits, talents, and skills – e.g., abstract reasoning or playing tennis – seem to be valued more for their tangible consequences – e.g., success or significant financial income – and consequently, it can be considered whether the talents or skills have been misused or well used. In this sense, it is common to hear the criticism that someone wasted his or her talent or skill – e.g., engaged in whatever activity would give him or her a quick income rather than developing his or her talent. However, it



is uncommon to hear criticism that someone did nothing with their goodness or integrity.

Character is composed of various elements at different levels of abstraction (Peterson & Seligman, 2004). The most abstract components are the virtues, the core characteristics valued by religious writers and moral philosophers. The next level of abstraction corresponds to character strengths, which are the psychological ingredients – processes or mechanisms – that define the virtues, the distinguishable pathways by which we display a given virtue. For example, the virtue of wisdom is manifested in the character strengths curiosity, love of knowledge, open-mindedness, creativity, and perspective, which have in common that they involve the acquisition and use of knowledge (Peterson & Seligman, 2004). Character strengths should not be viewed as isolated mechanisms of automatic effects on behavior; rather, virtuous activity involves the choice of virtue for its own sake, considering a justifiable life project that leads to human excellence or flourishing (Park et al., 2004). The lowest level of abstraction is composed of situational themes that are the specific habits that lead people to manifest a strength in a given situation. Although this is the lowest level of abstraction connecting us to the manifestation of character strengths in specific situations, it is the most elusive and diverse aspect because of an overly broad list of situational themes related, for example, to families or military academies. In this sense, there is a wide variety of ways in which moral excellence can be manifested in a parent or a cadet.

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## Character Strengths in the Military Context

From the point of view of positive psychology, a social group that becomes especially relevant is the military population. This is because their beliefs and doctrinal bases hold that the military leader must have virtues or personal conditions, such as courage, integrity, responsibility, and enthusiasm, which are similar to the character traits studied in positive psychology. The importance given by the military to positive traits is not left undetermined but is materialized, in such practices as the evaluation of the character traits of students at the military academy. Indeed, unlike most civilian universities, the military academy produces a character trait rating that is included as part of the overall evaluation of each cadet's performance and that plays a significant role because it may have implications for his or her permanence within the military educational institution.

A strong belief in the military is that moral virtues are important characteristics for effective military leadership. This idea is not only embodied in the military doctrine, which states that character and values are critical for successful military leadership (Ejército Argentino, 1990), but is also held by military officers and students (Casullo & Castro Solano, 2003). For example, the military doctrine of the Argentine Army (1990) explicitly mentions that the future military leader must possess specific character traits, like perseverance, initiative, and integrity. The character traits mentioned can be conceptually linked, with varying levels of precision, to the positive traits as defined and classified by Peterson and Seligman (2004).



Similarly, (Matthews et al., 2006) asserted that the US Army doctrine (Department of the Army, 1999), explicitly lists character traits of importance in military leadership. The authors have pointed out that because the military doctrine does not provide operational definitions of character or values, the concepts in the military doctrine are not directly comparable to the formal constructs of character virtues and strengths defined by Peterson and Seligman (2004). However, the authors recognized that at least half of the positive traits in their classification are cited in the military doctrine. Some empirical studies have advanced in verifying this significant belief, and there is empirical evidence from the perspective of positive psychology (Boe et al., 2015; Matthews et al., 2006).

Within the framework of positive psychology, several empirical investigations have been conducted among the military population, including the study of the 24 character strengths of Peterson and Seligman's (2004) character classification. Different aspects linked to these morally valued traits are described below.

**Relevance** A group of experts and military personnel showed which character strengths they considered relevant to be successful as a military leader. Experts and military members of the Norwegian Military Academy suggested that nine of the character strengths apply to professional performance: leadership, integrity, persistence, courage, teamwork, open-mindedness, social intelligence, self-regulation, and creativity (Boe et al., 2015).

**Cadets and Civilian Students** There are differences between civilian and military university students in character strengths (Cosentino & Castro Solano, 2012). In a sample of Argentinian male students matched in age and career stage, Army cadets presented higher levels of spirituality, social intelligence, love, prudence, humility, self-regulation, and leadership, and lower levels of appreciation of beauty and excellence, controlling for social desirability effect. In another research, differences were found between first-semester West Point cadets and a group of US civilian students (Matthews et al., 2006). West Point cadets had higher scores compared to civilians on courage, prudence, teamwork, curiosity, fairness, honesty, hopefulness, perseverance, leadership, humility, self-regulation, social intelligence, and spirituality, but lower scores on the appreciation of beauty and excellence. In both studied populations, not only did the cadets present higher levels of character strengths compared to civilians, but they also coincided in that the cadets presented higher levels of social intelligence, prudence, humility, self-regulation, and leadership strengths, while the appreciation of beauty and excellence presented lower levels compared to civilian students from the same country.

**Cadets from Different Countries** There are also differences in the level of character strengths among first-semester cadets from different countries (Matthews et al., 2006). A comparison between US and Norwegian cadets showed that US cadets had higher levels of all character strength scores, except for forgiveness and vitality, for which no differences were detected.

**Cadets With and Without Military Family** Also, there are differences in character strengths among military students whose parents are military personnel, compared to those who do not come from a military family background (Gosnell et al., 2020). In the sample of cadets at West Point Military Academy, the United States, the cadets who came from a family with military parents presented less perseverance and self-regulation compared to cadets who came from a non-military family.

**Cadets at the Beginning and End of the Academy** There are differences between first and last year cadets in character strengths (Cosentino & Castro Solano, 2012). Final year cadets in the Argentine Army academy presented higher levels of forgiveness, but lower kindness and teamwork, controlling for social desirability, compared to first-year cadets.

**Changes Over Time in Cadets** There are character strength changes over time in the military institution. In a sample from the United States Coast Guard Academy, decreases and increases were determined in strength levels by comparing last year to first-year students of the academy (Giambra, 2018). Ranked from largest to smallest, the decreases in the last year in comparison to the first year were observed in citizenship, spirituality, hope, love, perseverance, vitality, humor, fairness, leadership, curiosity, honesty, and self-regulation. Increases, ordered from highest to lowest, were found in appreciation for beauty and excellence, fairness, and love of knowledge.

**Academic and Military Performance** Character strengths are associated with the academic and military performance of military cadets (Cosentino & Castro Solano, 2012). In first-year Army cadets, the character strength love for learning had a positive relationship, while forgiveness had a negative relationship with academic performance. In senior cadets, persistence and creativity were positively related, while humility and teamwork were negatively related to academic performance. In first-year cadets, leadership and vitality were positively related, while the appreciation of beauty and excellence and fairness were negatively associated with performance. Persistence and vitality were positively related, while self-regulation was negatively related to performance in military subjects in the senior year. There were also differences in the relationship between character strengths and academic and military performance among cadets with military parents compared to those with non-military parents (Gosnell et al., 2020). The relationships of character strengths with academic and military performance were similar within each of the student types, but the profile of associations was different between groups. For example, in cadets with military parents, perseverance, self-regulation, and prudence were positively related, while love was negatively related to academic and military performance; and humility was positively related to military performance. In cadets with non-military parents, forgiveness, vitality, gratitude, fairness, curiosity, and prudence were positively related to academic performance. The relationship of strengths with military performance showed a similar profile.

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## Summary

Positive psychology has been around for about 20 years, and there is a classification of character strengths that has prompted research on morally valued traits for less than 20 years. Several investigations have been conducted on the military population, which concluded that character strengths are linked to various outcomes and group differences. Most of the research reviewed here shows studies with the military cadet population. However, studies including the 24 character strengths from Peterson and Seligman's (2004) VIA classification on military personnel serving as officers are scarce. Because character strengths have been useful in describing and comparing characteristics and outcomes in cadet populations, we hope that researchers use the VIA classification of 24 character strengths to study officers' military career development, performance in combat, or search and rescue activities.

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## Cross-References

- ▶ [Military Behavior and Ethics](#)
- ▶ [Military Families: Topography of a Field](#)
- ▶ [Military Leadership](#)
- ▶ [Military Performance](#)
- ▶ [Military Psychology](#)
- ▶ [Military Training, Education, and Socialization](#)

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# Realist International Theory and the Military

Brian C Schmidt

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## Abstract

Realism is generally seen as one of the most influential theories of international politics. Military and foreign policy officials adhere to the apparent timeless insights of realism. They stress the importance of power, especially military power, and the need to ensure the survival and security of the state. Ontologically, realism depicts a hostile world of power-seeking states. Some realists explain this in terms of human nature while others emphasize the anarchical structure of international politics. The chapter begins with a brief overview of the development of realist theory from Thucydides, who was an Athenian military official, to the present day. The next section explains the various epistemological, methodological, and ontological positions that realists hold. Next, the common elements that comprise the essence of realism will be identified: rationality, statism, survival, and self-help (the three S's). In the third section, the differences between two variants of realist theory, classical and structural realism, are explained. In the

B. C. Schmidt (✉)

Department of Political Science, Carleton University, Ottawa, ON, Canada

e-mail: [BrianSchmidt@Cunet.Carleton.Ca](mailto:BrianSchmidt@Cunet.Carleton.Ca)

conclusion the timeless wisdom of realism is revisited by considering the rise of China and the implications this has for international order.

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**Keywords**

Classical realism · Structural realism · Power · Balance of power · Anarchy · security · Self-help · Survival · Rationality

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**Introduction**

The political scientist Robert Gilpin (1996) once wrote that “no one loves a political realist.” One way to interpret Gilpin’s sentiment is that realists frequently present a pessimistic and tragic view of international politics. No matter the proposal, realists recognize that there are enduring patterns of behavior that frequently thwart the noblest of intentions to reform the practice of international politics. Realists concede that peace is a worthwhile goal but at the same recognize that it is frequently illusive. Rather than striving for perpetual peace, which is impossible, realists seek to reduce the incidence of war and the recourse to violence. In the process, they offer a set of prescriptive maxims to guide state behavior. While many have sought to wish away or dismiss the principles of realism, realists throughout the ages retort that when ignored, bad things often follow.

Part of the appeal of realism is the claim that it provides timeless insights about the practice of international politics. The idea of the timeless wisdom of realism rests, in part, on the claim that contemporary realists are part of an ancient and continuous tradition of thought that goes all the way back to the writings of Thucydides (460–406 BC) and his account of the Peloponnesian War. This is perhaps best illustrated by the notion that today the United States and China are looked in a “Thucydides trap,” which is analogous to the situation faced by Athens and Sparta (Allison 2018). The academic theory of Realism that became dominant after World War Two is often claimed to rest on an older, classical tradition of thought. Although there are various criteria of what constitutes a tradition, common to most understandings is the idea that a similar set of ideas, customs and practices are handed down from one generation to the next. The belief that there is a realist tradition of thought rests on the claim that there are a set of assumptions and ideas that all realists embrace. Yet while it is demonstrated that most realists do subscribe to a shared set of assumptions including rationality, statism, survival, and self-help (the three Ss’), it is also argued that there are a number of distinct realist theories such as classical, structural, and offensive realism. The diversity of realisms makes it difficult to establish a unified realist ontology, epistemology, and methodology. Additionally, even philosophers of science disagree about the meaning of these terms. To simplify greatly, ontology deals with the question of what exists and constitutes reality, epistemology is concerned with the question of what constitutes knowledge, and methodology addresses the issue of how knowledge is generated (for further elaboration, see this handbook’s first section).

The chapter begins with a general introduction to the so-called realist tradition. Here some attention is devoted to the writers and ideas that predated realism as a formal theory of international politics. The main focus of this section, however, will be on the development of realist theory beginning in the late 1940s. In the next section, the key assumptions of what can be termed the essential realism are identified and explained. In the third section, several distinct realist theories are specified, including classical, structural, and offensive realism. In the concluding section, the idea of the timeless wisdom of realism and its applicability to the present age is discussed again.

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## Core Elements of Realism

According to the conventional wisdom, during the 1940s realism replaced idealism as the dominant theory of international politics. Writing in the aftermath of the First World War, the “idealists,” a term that realist writers have retrospectively imposed on the inter-war scholars, focused much of their attention on understanding the cause of war so that a remedy could be found. Yet the post-World War Two realists argued that the inter-war scholars’ approach was flawed in a number of respects. For example, they ignored the role of power, overestimated the degree to which states shared a set of common interests, and were overly optimistic that the League of Nations could overcome the scourge of war. The outbreak of the Second World War in 1939 confirmed, for the realists at least, the inadequacies of the idealists’ approach to studying international politics.

A new approach, one based on the timeless insights of realism, replaced the discredited idealist approach. Writing on the eve of World War Two, E.H. Carr, in his brilliant book *The Twenty Years’ Crisis* (1939), charged that International Relations (IR) had been in an initial phase of wishful thinking and argued that a new phase of realism was needed in order to advance a science of international politics. However, it was not exactly clear what Carr meant by either science or realism. Histories of the academic field of IR describe a Great Debate that took place in the late 1930s and early 1940s between the inter-war idealists and a new generation of realists who all emphasized the ubiquity of power in the politics among nations (Schmidt 2012). The standard account of the Great Debate is that the realists emerged victorious, and from 1939 to the present, theorists, policy-makers, and military officials have continued to view the world through a realist lens. Realism taught foreign policy officials to focus on interests rather than on ideology, to seek peace through strength, and to recognize that great powers can coexist even if they have antithetical values and beliefs. The fact that realism offers something of a manual for maximizing the interests of the state in a hostile environment explains why it remains the dominant tradition in the study of world politics.

The theory of realism that prevailed after the Second World War is often claimed to rest on an older, classical tradition of thought. It is not uncommon for contemporary realist writers to claim themselves to be part of an ancient tradition of thought that includes such illustrious figures as Thucydides (c. 460–406 BC), Niccolò



Machiavelli (1469–1527), Thomas Hobbes (1588–1679), Jean-Jacques Rousseau (1712–78) and a variety of other thinkers and practitioners such as Otto von Bismarck. The insights that these thinkers offered into the way in which state leaders should conduct themselves in the realm of international politics are often grouped under the doctrine of *raison d'état*, or reason of state. According to the historian Friedrich Meinecke, *raison d'état* is the fundamental principle of international conduct, the state's First Law of Motion: "It tells the statesman what he must do to preserve the health and strength of the State" (1957, p. 1). Most importantly, the state, which is identified as the key actor in international politics, must pursue power, and it is the duty of the statesperson to calculate rationally the most appropriate steps that should be taken to perpetuate the life of the state in a hostile and threatening environment. Here the contours of the realist ontology of international politics are seen as a realm of competition and security seeking behavior. Ontology in this sense is literally an account of the nature of "reality"; that is, of what exists. The survival of the state can never be guaranteed, because the use of force culminating in war is a legitimate instrument of statecraft. This leads to the realist maxim, which is sometimes understood in terms of *Realpolitik*, that "the law of the strong is the determining factor in politics" (Bew 2016, p. 32). For many, this insight originates with Thucydides' account of the Melian dialogue where the Athenians announce that they are following the timeless principle that the powerful do what they want and the weak have to endure the consequences. In this particular dialogue between a powerful Athens that is intent on conquest and the weak island of Melos that is seeking survival, Thucydides seeks to demonstrate that the desire for power and the need to follow self-interest are fundamental laws of nature.

Hobbes is another political theorist that realists often rely on to support their ontology of international politics as a never-ending struggle for power. Hobbes provided the first English translation of Thucydides' *History of the Peloponnesian War*. What intrigues realists about Hobbes is his account of the state of nature, which is envisioned as a time before people lived under the rule of a powerful centralized government. This situation is seen as analogous to the anarchical condition of international politics where there is no higher authority above the collection of sovereign states. Anarchy in this sense refers to a condition where there is no higher authority to make laws. For Hobbes, in the absence of an overarching power, human beings exhibited "a perpetuall and restlesse desire of Power after power, that ceaseth onely in Death" (1968, p. 161). Moreover, he claimed that life in the state of nature was "solitary, poore, nasty, brutish, and short" (1968, p. 161). In this anarchical situation, the only solution, according to Hobbes, was to form a social contract and establish a centralized authority to help keep law and order. However, in solving the problem of disorder domestically by creating a sovereign authority, the same set of characteristics that Hobbes associated with the state of nature are transferred to the realm of international politics where no higher authority exists. In fact, Hobbes wrote that international politics provided the best illustration of the anarchical state of nature because it resembled a posture of war of every state against every state.

As we shall see, the assumption that the state is the principal actor, coupled with the view that international politics takes place under a condition of anarchy, helps to

define the essential core of realism. There is, however, one issue in particular that theorists associated with *raison d'état*, and classical realism more generally, were concerned with; the role, if any, that morals and ethics occupy in international politics. Realists are skeptical of the idea that universal moral principles exist and, therefore, warn state leaders against sacrificing their own self-interests in order to adhere to some indeterminate notion of "ethical" conduct. Moreover, realists argue that the need for survival requires state leaders to distance themselves from traditional notions of morality. Machiavelli argued that these principles were positively harmful if adhered to by state leaders. It was imperative that state leaders learned a different kind of morality, which accorded not with traditional Christian virtues but with political necessity and prudence. Proponents of *raison d'état* often speak of a dual moral standard: one moral standard for individual citizens living inside the state and a different standard for the state in its external relations with other states. But before the conclusion that realism is completely immoral is reached, it is important to add that proponents of *raison d'état* argue that the state itself represents a moral force, for it is the existence of the state that creates the possibility for an ethical political community to exist.

Whether or not contemporary realists, most of whom are university professors, are part of the same continuous tradition that we assume Thucydides, Machiavelli, and Hobbes belong to is a contentious question. In part, it depends on the criteria that is used to define a tradition.

No matter when we date the official beginnings of the field of IR, there is no doubt that Hans J. Morgenthau, who, like many others, fled Nazi Germany and emigrated to the United States during the 1940s, was the most influential realist of the twentieth century. His book, *Politics Among Nations: The Struggle for Power and Peace* (1948) was the first systematic attempt to create a realist theory of international relations. Theory was necessary for Morgenthau, because without it there was no way to distinguish the subject matter of international politics. Ontologically, politics among nations, for Morgenthau, was a never-ending struggle for power. The key concept for Morgenthau was interest defined in terms of power. All states have interests, but they can only be pursued relative to the amount of power a state possesses. For Morgenthau, the pursuit of the national interest in a world of competing interests was the essence of foreign policy.

Morgenthau provided a theoretical explanation for the ubiquitous struggle for power: human nature. According to Morgenthau, "man is a political animal by nature" who "is born to seek power" (1946, p. 168). He then transfers the bedrock assumption of man's inherent lust for power to describe the behavior of states. Just like individuals, Morgenthau argued that the goal of every state was to maximize power to the optimal level. Methodologically, by assigning primacy to individuals, Morgenthau embraced empiricist-inductivism (Tellis 1995). Beginning with empirical observations about the behavior of individuals and states, Morgenthau aimed to discern universal principles of international politics. Yet, at the same time, Morgenthau was critical of the project to create a science of politics. Like many others of his time, science was viewed as synonymous with positivism, which Morgenthau sharply critiqued in *Scientific Man Versus Power Politics* (1946). At one point in

time, positivism was the reigning philosophy of science that rested on three principles: one, a belief that there was a hierarchy of science with the natural sciences being on top; two, there is a unity of science meaning that the basic principles and methods of science were the same; and finally, that scientific knowledge was based on its mode of acquisition – logical empiricism. Theories were viewed instrumentally as a means of uncovering empirical facts. This was widely believed to be the way that the natural sciences produced valid knowledge. Yet, at the end of the day, international politics, for Morgenthau, was more of an art than a science. According to Morgenthau, “the principles of scientific reason are always simple, consistent, and abstract; the social world is always complicated, incongruous and concrete” (1946, p. 10). Power, for example, which encompassed both tangible and non-tangible elements, could never be measured in the same way that physicists measured atmospheric pressure.

The next important development in realist theory was the publication of Kenneth Waltz’s seminal *Theory of International Politics* (1979) that established a new form of structural realism or neorealism. Waltz was critical of all the previous inductive attempts to create a theory of international politics. He termed theories that either focused on human nature or the behavior of individual states as “reductionist.” Common to these theories, including Morgenthau’s theory, was the idea that the “whole shall be known through the study of its parts” (Waltz 1979, p. 19). Waltz concluded that the inductivist path to theory was a dead end because by only focusing on various pieces of data or specific facts no understanding of how they are connected or how they contribute to certain patterns of behavior is possible. He, therefore, set out to develop a systemic theory that could explain important international outcomes such as wars and the balance of power without any reference to human nature or the political characteristics of specific states. In this manner – and as the section on structural realism unfolds in detail below – Waltz believed that the continuities of international politics could be explained in terms of a similar set of incentives and disincentives that all states confronted.

Methodologically, Waltz pursued a deductive path where the behavior of states was derived from the elements that defined the structure of the international system. Waltz was less interested in explaining the foreign policy behavior of states per se than of important international outcomes such as the balance of power. The international system, according to Waltz, consisted of a structure and interacting units. Ontologically, the structure of the international system was anarchy; international politics took place in the absence of a centralized authority; there is no world government. For Waltz, the anarchical structure of international politics is the permissive cause of war because there really is nothing to prevent one state from attacking another state. The units, according to Waltz, are states and the number of Great Powers at any one time helped to distinguish one structure from another. While the anarchical structure of international politics has been stable for centuries, the distribution of power among the units is more in flux. At the time that Waltz was writing, the distribution of capabilities was characterized by bipolarity: two Great Powers, the United States and the Soviet Union, which was different from previous multi-polar systems. Waltz drew heavily from micro-economic theory to illustrate

how markets, as well as international systems, are spontaneously generated through the inadvertent actions of firms and states. Yet, once created, the structure greatly shapes the behavior of the units. Waltz argued that there was a strong incentive for states to emulate the behavior of the most successful states, which he claimed were those that sought an appropriate amount of power to maintain their security and existence.

Although Waltz set out to create a systemic theory of international politics, epistemologically he remained wedded to a quasi-positivist, instrumentalist notion of theory. This is most evident in the role that assumptions, such as rationality, play in Waltz's theory. Consistent with instrumental-empiricists, Waltz does not consider theoretical assumptions to be necessarily true, but rather to be useful in the process of creating a theory. Theoretical assumptions, as well as theories themselves, are not, according to instrumental empiricism, intended to mirror reality, but instead to be useful for understanding a specified realm of behavior. But as the positivist conception of science has been thoroughly critiqued by most philosophers of science, other structural realists, such as John J. Mearsheimer, have come to embrace a different epistemological position termed scientific realism. Unlike instrumental-empiricists, scientific realists argue that theories are meant to uncover reality and therefore should be based on assumptions that are real rather than useful (MacDonald 2003). As Mearsheimer writes, "sound theories are based on sound assumptions" (Mearsheimer 2001, p. 30). For Mearsheimer, the assumption that great powers are rational actors is based on the fact that states usually behave rationally because it gives them the best chance to survive. By embracing scientific-realism, Mearsheimer's theory of offensive realism will encounter anomalies when a state does not act rationally whereas non-rational behavior is not a problem for Waltz's theory (Mearsheimer 2009).

Although, as the next section will demonstrate, there are a number of distinct theories of realism, there are, nevertheless, a set of core elements that define the essence of realism. Tim Dunne and Brian Schmidt argue that realists subscribe to the following "three Ss": statism, survival, and self-help. Before discussing each of the three Ss, I begin with the realist assumption that states are rational actors (Dunne and Schmidt 2020).

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## Rationality

Although some controversy exists, it clearly is the case that realist theory embraces the assumption of rationality. In fact, it is difficult to envision realist theory without the rational actor assumption. More often than not, the rational actor assumption of realism implies nothing more than the idea that states behave in an instrumental manner to achieve their desired goals. Realists generally do not devote much attention to unpacking the rational actor assumption apart from asserting that states make considered assessments about their external environments and act strategically to realize their interests. As Joseph Grieco (1997, pp. 164–165) explains "state rationality, from a realist viewpoint, has at least three elements." First, "realists

assume that states are goal oriented.” Second, “realists assume that states have consistent goals. . .state preferences are ordered and transitive in the sense that if outcome A is preferred to B, and B is preferred to C, then A is preferred to C.” Third, “states are assumed by realists to devise strategies to achieve their goals” and “these strategies take into account the rank ordering by states of these goals.” It is important to emphasize that although the rational actor assumption is a core element of realist theory, realists themselves acknowledge that states often fail to act in a consistently rational manner. The decision the United States made to invade Iraq in 2003 serves as a recent example of a state behaving in a non-rational manner. For Mearsheimer and Walt (2003), the Iraq War was completely unnecessary because there were other rational options, such as containment, that would have better served American interests.

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## Statism

Although there is a plethora of different actors in international politics, such as international organizations (IO's), non-governmental organizations (NGO's) and terrorist groups, realists identify states, and especially the great powers, as the main actors. This is often referred to as the state-centric assumption of realism. For realists, the state is the main actor and sovereignty is its distinguishing characteristic. Sovereignty, in principle, allows each state to determine its own fate and conduct its domestic affairs without any outside interference. Sovereignty means that each state has supreme authority to make and enforce laws within its own territorial space. As the universal pretensions of the Middle Ages, most notably in the form of the Holy Roman Empire, began to wane, the sovereign state slowly began to dominate the political landscape. The formal beginning of the territorial sovereign state system is usually attributed to the Peace of Westphalia (1648), which attempted to resolve the religious tensions between Catholics and Protestants that fueled the destructive Thirty Years' War (1618–1648). By embracing Jean Bodin's (1530–1595) conceptualization of sovereignty, the Peace of Westphalia established two enduring features of international politics: one, that inside the territorial state there is supreme authority to rule; and two, there is no higher power to rule above the separate and distinct states (Knutsen 1992). From the outset, groups of like-minded people, i.e., powerholders, quickly learned that those who organized themselves in the form of a sovereign state had distinct advantages over those who did not. This has been especially the case both in terms of the military capacity to defend one's own state and the ability to wage war against others. As the historical sociologist Charles Tilly (1990) explains, war made the state and the state made war. In terms of military capabilities, sovereign states have had a distinct advantage compared to alternative forms of political organization.

Realist theory operates according to the view that, domestically, the problem of law and order is largely solved. However, on the outside, in the external relations among independent sovereign states, insecurities, dangers, and threats to the very existence of the state loom large. Realists attempt to explain this on the basis that the

very condition for order and security – namely, the existence of an over-arching centralized authority – is missing from the international realm. This gives rise to the ontological claim that international politics takes place under a condition of anarchy. Realists argue that, in a condition of anarchy, states compete with each other for power and security. Power is viewed as the best means to achieving security. The nature of the competition is frequently viewed in zero-sum terms; in other words, more power for one actor means less for another. This mindset shaped the military policies and alliances of the United States and the Soviet Union throughout the Cold War from 1945–1991. Any gain by one side in terms of nuclear weapons or alliance partners was viewed by the other side as a loss. The competitive logic of power politics makes every state, especially the Great Powers, be attentive to the relative distribution of power. For realists, the aggregate power that a specific state possesses is of lesser importance than where a state stands relative to the power of other states.

As mentioned in the Introduction, realism is often viewed as being synonymous with power politics. Hans J. Morgenthau famously wrote “international politics, like all politics, is a struggle for power” ([1948] 1955, p. 25). Yet this begs the question of how realists understand the concept of power. Stephen Walt, a highly regarded American realist at Harvard University, admits that “the concept of power is central to realist theory, yet there is still little agreement on how it should be conceived and measured” (Walt 2002, p. 222). As the next section will detail, there are differences in how the various schools of realism conceptualize power. In general, however, realists are reluctant to view power in relational terms and instead endorse a national power approach. Proponents of the elements of national power approach equate power with the possession of specific resources. The resources that are most typically used as an indicator of national power include the level of military expenditure, size of the armed forces, gross national product, size of territory and population. Stefano Guzzini (1998) refers to this as the “lump concept of power which assumes that all elements of power can be combined into one general indicator” (2000, p. 55). One of the shortcomings of the national power approach is the difficulty of converting power in terms of resources to the ability to change the behavior of other actors. The Vietnam War (1954–1975), for example, is an interesting case because the United States clearly had overwhelming military capabilities but could not manage to change the behavior of the North Vietnamese who were committed to the unification of Vietnam regardless of the costs.

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## Survival

The third principle that unites realists is the assertion that, in world politics, the pre-eminent goal of every state is survival. It is largely on the basis of how realists depict the international environment that they conclude that the first priority for state and military leaders is to ensure the survival of their state. Survival is held to be a precondition for attaining all other goals, whether these involve conquest of others or merely independence. Under anarchy, the survival of the state cannot be guaranteed. As evidenced by history, perhaps no better than the case of Poland during World War

Two, survival as a political entity is not guaranteed. One reason for this is that unlike the situation domestically, there is no emergency number a state can call when it feels threatened. Another reason is partly explained in terms of the power differentials of states. Intuitively, states with more power stand a better chance of surviving than states with less power. Power is crucial to the realist lexicon and has traditionally been defined narrowly in military strategic terms. Yet irrespective of how much power a state may possess, the core national interest of all states must be survival. Like the pursuit of power, the promotion of the national interest is, according to realists, an iron law of necessity.

What options do states have to ensure their own survival? This brings us to one of the crucial mechanisms that realists throughout the ages have considered essential to preserving the liberty of states – the balance of power. Although various meanings have been attributed to the concept of the balance of power, the most common definition holds that if the survival of a state is threatened by a hegemonic state or coalition of stronger states, they should join forces, establish a formal alliance, and seek to preserve their own independence by checking the power of the opposing side. A classic example of this was the actions taken by the United Kingdom, Austria, Russia and Prussia during the early 1800s to counter France's bid under Napoleon to dominate all of Europe. The mechanism of the balance of power seeks to ensure an equilibrium of power in which no state, or coalition of states, is in a position to dominate all the others. Realists argue that great power war is less likely when there is a relatively equal distribution of power because rational states will only choose war when they believe they will be victorious. The Cold War competition between the East and West, as institutionalized through the formal alliance system of the Warsaw Pact and the North Atlantic Treaty Organization (NATO), provides a prominent example of the balance of power mechanism in action. One way to prevent a hot war between the United States and the Soviet Union was to maintain a balance of power. As the Cold War progressed, each of the two adversaries engaged in an intensive arms race, most noticeable in the quantitative and qualitative increase in nuclear weapons, to ensure that no state gained a power advantage over the other. Following the collapse of the Soviet Union in 1991, there has been a significant imbalance of power. Balance-of-power realists consider this to be a dangerous situation and anticipate a new balance forming whereas certain realists have argued that the presence of a dominant hegemonic power has a pacifying effect (Gilpin 1981).

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## Self-Help

In the international system, there is no authority above states to counter the use of force. War is always a possibility because there is nothing that can prevent a state from using force against another state. Security can therefore only be realized through self-help. Waltz (1979, p. 111) explains that in an anarchic structure, “self-help is necessarily the principle of action.” States must ultimately rely on themselves to achieve security. While states do have the option of joining or forming an alliance,



there is always the worry that alliance partners may not honor their commitments when they are needed most, as when Italy withdrew from its alliance with the Central Powers at the outset of World War One. In the same vein, throughout the cold war, some states, such as France, questioned whether the United States would risk thermonuclear war with the Soviet Union in order to come to the defense of a NATO member. Because realists insist that international politics is a self-help world, those states that can rely on themselves for security are at a distinct advantage over those who cannot.

Yet in the course of providing for one's own security, the state in question will automatically be fueling the insecurity of other states. The term given to this spiral of insecurity is the security dilemma. According to Wheeler and Booth, security dilemmas exist "when the military preparations of one state create an unresolvable uncertainty in the mind of another as to whether those preparations are for "defensive" purposes only (to enhance its security in an uncertain world) or whether they are for offensive purposes (to change the status quo to its advantage)" (1992, p. 30). This scenario suggests that one state's quest for security is often another state's source of insecurity. States find it difficult to trust one another and are often suspicious of other states' intentions. Thus, the military preparations of one state are likely to be matched by those of neighboring states. According to John Hertz, who was one of the first realists to articulate the security dilemma, "since none can ever feel entirely secure in a world of competing units, power competition ensues, and the vicious circle of security and power competition is on" (1950, p. 157). The irony is that, at the end of the day, states often feel no more secure than before they undertook measures to enhance their own security. Some have suggested that one way to dampen the security dilemma is for states to have a military doctrine that is able to clearly distinguish between offense and defense. The argument is that if states are able to adopt a defensive military posture, conquest would be less likely compared to a situation when offense has the advantage (Jervis 1978). Yet throughout history, it has been difficult to determine whether a particular weapon or military doctrine is inherently offensive or defensive in nature.

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## One Realism, or Many?

The notion that there is a monolithic theory of realism is increasingly rejected by those who are both sympathetic to, and critical of, the realist tradition. The alternative view is that there are a number of different realist theories of international politics. In this section, the distinction between classical and structural realism is emphasized. But here, a further distinction is made between Waltzian structural realism and Mearsheimer's structural theory of offensive realism.



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## Classical Realism

The classical realist lineage begins in Ancient Greece with Thucydides' representation of power politics as a law of human behavior. The drive for power and the will to dominate are held to be fundamental aspects of human nature. The behavior of the state as a self-seeking egoist is understood to be a reflection of the characteristics of human beings. It is human nature that explains why international politics is struggle for power. The reduction of realism to a condition of human nature is prominent among classical realists including, Morgenthau. Some have suggested using the label of "human nature realism" instead of classical realism (Mearsheimer 2001). In any event, classical realists argue that it is from the nature of man that the essential features of international politics, such as competition, fear, and war, can be explained. For both Thucydides and Morgenthau, the essential continuity of the power-seeking behavior of states is rooted in the biological drives of human beings.

According to Morgenthau, human nature displays a natural inclination to seek power over others. Realists draw on a number of classical thinkers in the history of political thought, such as Machiavelli and Hobbes, to support the view that human nature explains the ubiquitous struggle for power. Morgenthau likened the three basic patterns of the struggle for power among states – to keep power (status quo), to increase power (imperialism), and to demonstrate power (prestige) – to man's lust for power. The important task of foreign policy was the ability to discern these different patterns and select the most rational policy to ensure the power and survival of one's own state. Morgenthau's theory of realism was meant to provide a rational map of international politics. The central concept for Morgenthau was interest defined in terms of power. He spent the majority of his career trying to persuade American foreign policy officials to follow their own particular national interest.

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## Structural Realism

Structural realists concur that international politics is a struggle for power, but they do not attribute this to human nature. Instead, structural realists ascribe security competition and inter-state conflict to the lack of an overarching authority above states. Waltz defined the structure of the international system in terms of three elements – organizing principle, differentiation of units, and distribution of capabilities. The organizing principle, according to Waltz, is anarchy; international politics takes place in the absence of a centralized authority. The units, as we have seen, are states. The only element that fluctuates is the distribution of capabilities among the great powers. According to structural realists, the relative distribution of power in the international system is the key independent variable in understanding important international outcomes such as war and peace, alliance politics, and the balance of power. Structural realists are interested in providing a rank-ordering of states so that they can discern the number of great powers that exist at any particular point in time. The number of great powers, in turn, determines the overall structure of the international system. For example, during the cold war there were two great powers – the

USA and the Soviet Union – that constituted the bipolar international system, and since the end of the cold war the international system has been unipolar.

How does the international distribution of power impact the behavior of states? In the most general sense, Waltz argues that states, especially the great powers, have to be sensitive to the capabilities of other states. The possibility that any state may use force to advance its interests results in all states being worried about their survival. According to Waltz, power, particularly military power, is a means to the end of security. In a significant passage, Waltz writes “because power is a possibly useful means, sensible statesmen try to have an appropriate amount of it.” He adds, “in crucial situations, however, the ultimate concern of states is not for power but for security” (Waltz 1989, p. 40). In other words, rather than being power maximizers, states, according to Waltz, are security maximizers. Waltz argues that power maximization often proves to be suboptimal because it automatically triggers a counterbalancing coalition of states. Like Morgenthau, Waltz believed in the efficacy of the balance of power. Unlike Morgenthau, Waltz argued that achieving a balance of power was easier when the system was bipolar rather than multipolar.

A different account of the power dynamics that operate in the anarchic system is provided by Mearsheimer’s theory of offensive realism, which is another variant of structural realism (Mearsheimer 2001). While sharing many of the same basic assumptions of Waltz’s structural realist theory, Mearsheimer provides a different and more tragic view of international politics. The environment that states inhabit, according to Mearsheimer, is indeed tragic in that although no one intentionally designed it, there is no way to escape the behavior that all states are compelled to follow, even when such behavior has adverse consequences. Unlike Waltz’s description of states as security maximizers, Mearsheimer argues that states are power maximizers. According to Mearsheimer, the structure of the international system compels states to maximize their relative power position. Under anarchy, Mearsheimer agrees that self-help is the basic principle of action, but he argues that states can never be certain about the intentions of other states. Consequently, he concludes that all states are continuously searching for opportunities to gain power at the expense of others.

Mearsheimer is very specific that military power, especially land power, is the quintessence of state power. He argues that a state with the most powerful army is *ipso facto* the most powerful state. Under anarchy, the accumulation of power is the best route to achieving security. Indeed, the ideal position, although one that Mearsheimer argues is virtually impossible to achieve because of what he calls “the stopping power of water,” is to be the global hegemon of the international system. Yet because global hegemony is impossible, he concludes that the world is condemned to perpetual great power competition.

## Conclusion

Realists believe that realism provides timeless insights about international politics. While critics strongly disagree, realists insist that the power dynamics that are underway today, particularly those related to the rise of China, once again confirm the timeless quality of realism. The character of the power struggle unfolding today between a declining United States and a rising China is eerily similar to the struggle between Athens and Sparta that ultimately resulted in the Peloponnesian War. Thucydides' explanation that the underlying cause of the war was the result of the growth of Athenian power and the fear which this caused in Sparta is a classic example of the impact that the distribution of power has on the behavior of state actors. If we are indeed witnessing a significant change in the distribution of power, the crucial question is whether this can be achieved peacefully and avoid the type of great power war that Thucydides described between Athens and Sparta. While some believed, or hoped, that the American unipolar order could last forever, realists strongly disagreed because they understood that states would eventually seek to check American power. They also understood that countries such as China and Russia would never feel secure in a world in which there is only one dominant power. One of the biggest questions of the early twenty-first century is whether countries such as China and Russia can rise peacefully and usher in a new multi-polar international system. While there are a number of different positions on this question, it should be evident by now that realism provides the most appropriate theory for understanding the power dynamics of international politics both in the past and present.

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# Liberal International Relations Theory and the Military

Scott A. Silverstone

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## Abstract

While much of the study and practice of international relations is anchored in the centuries-old tradition of realism, this chapter explores the important contributions that another theoretical tradition, liberalism, has made to the study of international security and the role of military power. Emerging from Enlightenment beliefs about the rationality of individuals and the potential for progress in human affairs, liberal theories and policy ideas have focused on offering alternative means for states seeking security, alternatives that might break the endless competition and warfare that realists see as inevitable in an anarchic world. Liberal theories emphasize how rules and institutions can help self-interested states achieve mutual interests, they see economic interdependence as a potent incentive for states to avoid war, and they argue that democracies enjoy more peaceful relations with other democracies. The chapter traces the history of liberal international relations theory as it matured in response to the mass violence and chaos of the twentieth century, and it examines a number of examples – like European integration, the post-World War II global economic order, and the control of nuclear weapons – to showcase how liberal ideas in practice might reduce the dangers of war and enhance the prospects for global cooperation.

S. A. Silverstone (✉)  
United States Military Academy at West Point, West Point, NY, USA  
e-mail: [Scott.Silverstone@westpoint.edu](mailto:Scott.Silverstone@westpoint.edu)

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**Introduction**

In the field of international relations, most scholars acknowledge that the realist tradition, with its pessimistic claims about human nature, the relentless and often violent struggle for security and power, and the inherently competitive character of international anarchy, remains the dominant approach in the study of state behavior. Realists claim a heritage reaching back to the venerable ancient Greek historian Thucydides (460–400 B.C.) and his chronicle of the Peloponnesian War in the fifth century BCE, as well as such foundational political philosophers as Niccolò Machiavelli and Thomas Hobbes (Schmidt, 2021). With its fixation on the inescapable potential for violent conflict among states, realist international relations theory seems tailor-made for understanding the role of military power in world politics and the military as a state institution.

Even though much of the study and practice of international relations is anchored in this centuries-old tradition, another western philosophical tradition, liberalism, has made important contributions to the study of security and the role of military power as well. Liberalism can also claim a heritage that reaches back at least to the Enlightenment period of the eighteenth century, when the spirit of rationalism, scientific inquiry, and a belief in the potential for human progress came to dominate the intellectual climate. In recent decades, specific theories within the liberal tradition, as well as liberal ideas at work in actual world politics, have enjoyed increasing prominence. This is true for liberalism as both an ontological framework (its claims about how the world works) for explaining state behavior and as a source of teleological promise (the goals we can achieve by studying international relations) as we search for policy solutions that might reduce threats and control the dangerous implications of international anarchy and military competition.

The purpose of this chapter is to explain what liberal international relations theory offers for understanding international security and military power. The next section frames liberalism with the key elements of the philosophy of science to explain how this tradition understands human nature and behavior, how it treats the character of the international system and state relations, how it conceptualizes power and the role of military force, and its essentially progressive orientation toward the human experience (Sookermary, 2021). This will set the stage for an assessment of different variants of liberal international relations theory and a discussion of specific examples of liberal theory in practice that range from the early twentieth century to the present, with direct relevance to military force in world politics.

## Liberal International Relations Theory and the Philosophy of Science

In many ways, liberalism can be considered a challenge to the dark vision presented by realists. It is an ontology that offers an alternative way to conceive of human nature and the possibilities for overcoming the most competitive and destructive aspects of state behavior. In fact, Enlightenment beliefs about the rationality of individuals and the potential for progress in human affairs have been a primary motivation behind liberalism for centuries, as successive generations struggled with the problems of repressive government, poverty, and the increasingly destructive character of warfare. This was particularly true after World War I and World War II, which showcased the immense scale of violence now possible in the industrial and nuclear age. Most liberals after World War II did not dismiss the core realist claim that humans are often driven by fear, insecurity, distrust, or the quest for power. Nor could they ignore what seemed like a historical reality that states appeared to be locked in cycles of competition and warfare, particularly as the two world wars were followed quickly by a new Cold War and the existential threat of an accelerating nuclear arms race. Despite the mass violence and dangers of military competition of the twentieth century, the liberal worldview simply denied that this was inevitable. And drawing from a positivist epistemology (which studies international relations to discover objective insights), liberals have sought ways to understand how states can, and do, break the cycle of competition and violence that realists seem resigned to.

Interestingly, one of the greatest critics of liberal international relations theory of the twentieth century, the British historian E. H. Carr (who derisively referred to it as “utopianism”), ultimately argued that realism alone is “barren,” and that it leads to the “sterilization of thought.” It forces humans, he argued, to simply adapt to the realities of seemingly irresistible forces at work in the world, while providing no plan of action or larger purpose to change the worst traits of human behavior. Carr asserted, however, that “such a conclusion is plainly repugnant to the most deep-seated belief of man about himself. That human affairs can be directed and modified by human action and human thought... The human will,” he believed, “will continue to seek an escape from the logical consequences of realism” (Carr, 1964, p. 10, 92–93). It is this effort to direct and modify human action and thought that liberal scholars and policy practitioners have taken most seriously, and which distinguish them most clearly from realists.

Like realism, liberalism is based on a set of logically connected assumptions that can form the basis of specific liberal theories. Most importantly, liberals contend that humans are rational and self-interested actors. This is obviously an assumption shared by realists. Unlike realists, however, liberals contend that individuals and the states they lead can achieve these self-interests, to include security and prosperity, through cooperation with other states. While realists argue that states exist in a zero-sum world – in which a gain for one state must come at the expense of another – liberals argue that states can seek *mutual interests* with other states, even as they coexist in an anarchical international system. That is, states can discover ways to better achieve their own security and prosperity by coordinating their behavior rather



than perpetually competing against one another. An important supporting assumption is that humans are capable of learning from mistakes and successes, have choice in how they pursue their interests, and can adjust their behavior if they discover that competition only leads to greater dangers and less prosperity. Learning and change in behavior are the root of human progress.

It is important to emphasize that liberals do not ignore the security imperative that realists focus on. This is clear in the writings of prominent early liberal philosophers such as John Locke, who argued that security from violent death must be the first priority of any political actor. Without physical security, no other human aspirations are possible. What liberals stress, however, is that it is possible to maximize security, not by accumulating more military and economic hard power than others, but through alternative means. American President Woodrow Wilson made this point at the end of World War I. What form of security did the balance of power system provide, he asked, when reviewing the tragic loss of 15 million lives and the ruin spread across much of Europe? The balance of power, Wilson argued, was bankrupt as a means to achieve security; it only magnified insecurity and could not prevent this horrible war (Wilson, 1923). While many realists would throw up their hands believing that a balance of power system was the best states were capable of to achieve security, President Wilson argued that humans could be enlightened enough to create a new cooperative system to achieve a more stable and lasting peace without great power war.

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## Alternative Forms of Liberal International Relations Theory

While liberals over the past centuries would all tend to share these ontological and teleological assumptions about human behavior, international relations, and security, Michael Doyle points out that there is “no canonical description of liberalism” (Doyle, 1986, p. 1152). In other words, there is no single, definitive version of the liberal worldview. Robert Keohane notes that there are three basic types of liberal theories: republican, commercial, and regulatory (Keohane, 1990, p. 176–182). All share a positivist epistemology and research methodologies, and all have direct implications for the role of military force in international security.

The oldest version of liberal international relations theory is republican security theory, which has its roots in both ancient Greek and Roman political philosophy (Deudney, 2007). The main claim here is that the way in which a state’s government is organized will influence how it behaves internationally. Specifically, republican institutions, such as democratic representation and political checks and balances among different parts of the government, are said to constrain the use of military force. In the Enlightenment period, this argument was advanced first by the American founders, who believed that the federal character of the American republic would make it less war prone (Jay, 1787; Madison, 1787; Silverstone, 2004), and by the German philosopher Immanuel Kant, who argued that the cause of “perpetual peace” would be best served by a “pacific union” among republican states that agreed to a peaceful order among themselves (Kant 1970, p. 100–101). In recent

decades, international relations scholars have called this the “Democratic Peace” and have studied the claim that democracies will not fight wars with other democracies, and that an international system with more democracies will produce a more peaceful world (Brown, Lynn-Jones, & Miller, 1996).

The logic of Democratic Peace theory presents two causal mechanisms said to produce this outcome. The first focuses on domestic political institutions: When engaged in a dispute that could escalate to war, the domestic political checks and balances and electoral accountability will constrain each democracy and make it easier to resolve the dispute without resorting to military force. The second causal mechanism focuses on a normative or cultural explanation for democratic peace. According to this argument, democracies recognize that other democracies share common political identities and beliefs that favor nonviolent conflict resolution, and as a result, the citizens and leadership of democratic states simply refuse to act violently against another democracy (Russett, 1993).

Of course, there is another side to this argument. Some scholars point out that the same liberal norms and identities that might keep the peace among democratic states can increase the likelihood or intensity of conflict with nondemocratic states. Michael Doyle notes that “liberalism is not inherently ‘peace-loving’; nor is it consistently restrained or peaceful in intent” (Doyle, 1983a, p. 206). When facing nonliberal states, he argues, liberal states will often raise “conflicts of interest into crusades.” Against weak nonliberal states that are judged to lack normative or moral legitimacy because of their repressive characteristics and behavior, liberal states are tempted to launch “imperial interventions” (Doyle, 1983b, p. 324). In the current era, it is easy to observe how the increasing hostility and competitive character of America’s relationship with both Russia and China is not merely a result of the mutual fears and uncertainties of an anarchic international system. The liberal impulse to challenge nonliberal states over their human rights records and repression of political rights and freedoms intensifies the antagonism and hostility in ways that decisively shape security relations.

The second form of liberal theory in Keohane’s typology is commercial or economic liberalism. As the name implies, this form of liberalism looks to trade as a potent form of cooperation that makes war less likely. Among the Enlightenment liberal philosophers, Montesquieu was the first to make this claim, arguing that “the natural effect of commerce is to lead to peace. Two nations that trade together become mutually dependent if one has an interest in buying, the other has an interest in selling; and all unions are based on mutual needs” (Hirschman, 1977, p. 80). Since war also destroys trade relations among belligerent states, modern liberal scholars see the preservation of trade and financial ties as a strong incentive for rivals to exercise restraint, so their disputes do not tip into violent conflict (Rosecrance, 1986; Copeland, 1996, p. 5–11).

In the contemporary era, the most successful example of using economic interdependence to promote peace among rival states has been the European Union, which we will discuss in more detail below. More recently, perhaps the most important application of economic liberalism is in the debate over how the continuing growth of Chinese economic, political, and military power will impact

the prospects for war and peace in the coming decades. As realist scholars point out, shifting power among major states in the international system tends to produce dangerous periods of uncertainty and fear over whether the rising power will use its growing capabilities in an aggressive way. Uncertainty and fear currently dominate American perceptions of the rise of China, while increasing militarized antagonism between China and Taiwan, and China and Japan lead many to worry about the risk that this antagonism could lead to war. But all parties also recognize that because of the deep commercial and financial ties among these states, one of the costs of war would be a terrible blow to their economies. Potential economic costs might then be one incentive, among several, for China, the United States, Taiwan, and Japan, to hold military competition below the threshold of armed conflict. In fact, this logic was central to American President Bill Clinton's efforts to admit China into the World Trade Organization in the 1990s (Ikenberry, 2008; Tang, 2021).

In a way, commercial liberalism can be considered one form of the third type of liberal international relations theory in Keohane's typology: regulatory liberalism. Regulatory liberalism is based on the simple claim that states can best pursue their mutual interests in many different areas of international life – such as security, economic growth, environmental protection, health, and social welfare – by creating rules to guide their behavior, rules that facilitate cooperation and increase trust and that help in the sharing of information and resources and in the adjudication of disputes. The most common term used to describe this type of liberal approach is “institutionalism” (or in earlier work, “regime theory”), which captures the important fact that states can create sets of rules, formal and informal, that define appropriate behavior, rules that set out the rights actors should enjoy and the obligations they should assume in how they behave and treat others. This is the essence of what social institutions are (Keohane, 1983; Keohane, 1998; North, 1990).

Keohane makes two important points about states' efforts to regulate their interaction through rules. First, authoritarian as well as democratic states can take part in this effort. While the republican, or democratic peace, version of liberalism has been prominent in international relations theory since the end of the Cold War, it is the most restrictive in scope because it only applies to the behavior of democratic states. But assuming that authoritarian states are rational actors, “Neoliberal Institutionalists” propose that nondemocratic states of various kinds are capable of recognizing that they might maximize their interests through “mutually beneficial agreements” with other states, just as well as democracies can (Keohane, 1990, p. 180). Second, the effort to discover mutual interests and develop rules to regulate cooperative interaction is not an easy task. While liberals do not accept the realist notion that anarchy necessarily produces competitive state behavior, they do accept that the lack of enforcement of agreements in world politics makes states wary of being cheated. Also, cooperation through rules means that states must voluntarily accept limits on their behavior, which might be difficult to do. Sometimes the temptation to cheat is too strong for sustained cooperation (Axelrod, 1984).

Despite these incentives to avoid cooperation, according to neoliberal institutionalists, if states calculate that their interests are still better met through cooperation than through rejection of cooperation, the basis for regulated behavior exists.

Perhaps the most potent rationale for playing by the rules in this rationalist ontology is what institutionalists call “reciprocity.” Simply put, it is the calculation that if I play by the rules, other states are more likely to play by the rules, which makes me better off. But if I break the rules, then other states will reciprocate by breaking the rules too, and I will lose the benefits of cooperation that help me achieve our state’s goals across a range of issue areas.

In recent decades, these three versions of liberal international relations theory – democratic peace, economic liberalism, and institutionalism – have been most prominent in the research conducted by scholars working in this tradition. But each reflects the concept of “interdependence,” first introduced to liberalism by European scholars in the late nineteenth and early twentieth centuries, and further developed by Keohane and Nye in the 1970s. Their work captured changes in the character of domestic and world politics that scholars and policy practitioners were observing. Keohane and Nye called it “complex interdependence,” and it was a direct challenge to realist theory’s claims (as discussed in the introductory chapter of this book section and in the chapter on realist theory) about the state as a unitary actor, the priority given to security and power in interstate relations, and whether nonstate actors play an important independent role in international politics (Rønnfeldt, 2021; Schmidt, 2021).

The complex interdependence paradigm rests on three basic premises. First, “multiple channels connect societies.” While states might still occupy the dominant position in world politics, nongovernmental interest groups and corporate actors develop “transnational” links with counterparts around the world, thereby making their governments’ policies “more sensitive” to these interests in other countries. Second, “foreign affairs agendas” are no longer dominated by a clear “hierarchy among issues.” Instead, military security is one of many issues that governments feel compelled to prioritize. Henry Kissinger, Secretary of State under Presidents Nixon and Ford and among the realist elites in American foreign policy, once noted that “the problems of energy, resources, environment, population, the uses of space and seas now rank with questions of military security. . . which have traditionally made up the diplomatic agenda” (Keohane & Nye, 2012, p. 20–22).

The third premise in the complex interdependence paradigm is that military force does not necessarily provide the most important source of power in world politics. It is important to note what Keohane and Nye admit: This logic works best among industrialized, pluralistic countries whose societies are linked by multiple webs of interdependence. These countries enjoy a wider “margin of safety” for their physical security with each other, and as a result, they can downplay the role of military power without assuming the security risks that realists warn about. While complex interdependence might not work among many pairs of states in the international system, it is still a radical development in world politics when put in historical perspective: The community of industrialized, pluralistic countries includes most of the major powers that in earlier centuries suffered from cycles of massive armed conflict (Keohane & Nye, 2012, p. 22–24).

Other scholars emphasize that liberals make different assumptions about the nature of states. While realists tend to treat the state as a unitary actor, liberals

point out that states are composed of a variety of domestic social actors (individuals, groups, and coalitions) that see the governmental apparatus of the state as a “transmission belt” for a variety of preferences they would like the state to pursue through its foreign policy (Moravcsik, 2008). These societal preferences can impact how the state perceives threats and identifies friends and adversaries. Social preferences might also set policy priorities that place demands on the state’s military forces that go beyond the need to provide basic national defense. Such new demands could include support for humanitarian intervention operations abroad, efforts to rescue “failing” states or those suffering from civil conflict. Citizens might demand that their military personnel will respect international law and ethics in the use of force, demand that the state respond to the plight of international refugees and ecological crisis, or provide natural disaster relief.

One of the early proponents of the complex interdependence paradigm, Joseph Nye, has also been a leading liberal voice challenging the realist assumptions about power in world politics. It seems that all intellectual approaches in the field of international relations recognize that the concept of power is central to social life at all levels, and that it defines political life in particular. For realists, what really matters is the so-called hard power that a state can mobilize in support of its security. Hard power includes those material resources that contribute directly to the state’s ability to physically defend itself from others’ aggression or to ward off their threats. Hard power might deter others’ aggressive intentions through the threat of painful retaliation or provide the tools to compel others to do what we want, either through the mere threat of pain or the delivery of pain. This is captured by what Thomas Schelling (1977) once called “the power to hurt.” Military power is paramount, but it is supported by other hard power resources that underwrite war potential, like economic assets, the state’s territory and population, and its natural resource base.

Nye (2011, p. 10–13) proposes that power in international politics is more complex. Hard power matters, but it fails to account for how states might influence the behavior of others, even reduce the threats they face in the international system, by leveraging institutional rules, by setting the policy agenda within international organizations, or by shaping other states’ preferences so they align with your own. As we will see below, institutional rules have been used to constrain nuclear weapons proliferation, the militarization of space, and the use of excessive military force in wartime. The ability to set the agenda within international organizations has led to restrictions on the use of land mines that kill and maim innocent civilians, generated support for collective security initiatives against emerging threats, and stimulated action on health care crises like the AIDS epidemic and efforts to reduce greenhouse gas emissions. If it is possible to shape other states’ preferences on important issues, it will be easier to convince them to exercise self-restraint on a range of dangerous actions, like the use of chemical or biological weapons, or to join global initiatives that serve a collective good, like a peacekeeping operation in a distant part of the world.

Nye’s most important contribution to this topic is his concept of “soft power,” which clearly is meant to capture sources of influence over others that do not depend on tangible hard power resources. In simple terms, a country’s soft power is about its

ability to attract others through its culture, its political values, its competence and accomplishments, and the perceived legitimacy of its behavior on the world stage. Attraction becomes a source of power if it allows that state to influence the decisions and actions of others without having to resort to threats or explicit offers of a payoff for cooperation. One interesting example of preference shaping and soft power in a military context is the practice of American service academies and war colleges opening student positions for cadets and officers from militaries around the world. One key objective is to shape their preferences for such values as civilian control of the armed forces, respect for human rights and the laws of armed conflict, and to cultivate general admiration for America that shapes the officers' behavior in the future so that it aligns with America's values and preferences.

In the next section, we turn to liberal international relations theory in practice and, by doing so, accept a challenge issued by John Mearsheimer (1994–1995), among the most prominent American realist scholars. Mearsheimer rejects the claim that liberal theory can reduce the dangers of military power in world politics. According to Mearsheimer, while liberal theory might provide a valid explanation for cooperation in issue areas such as trade and environmental protection, it has little to offer for states seeking a way to understand and pursue military security in an anarchic international system. The examples below might illustrate where Mearsheimer's critique falls short.

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## **Liberal International Relations Theory in Practice**

The liberal impulse in world politics surged in the aftermath of World War I, when President Woodrow Wilson became the most passionate voice arguing for the rejection of balance of power politics, which had been the basis of the international order since the emergence of the modern state system. In its place, he proposed a new liberal order based on several key features: 1) democratic governance within states to give voice to what he believed would be the natural interests of citizens of all countries in peace; 2) a system of arbitration of state conflicts to prevent the inevitable disputes from turning violent; and 3) a League of Nations embodying a system of collective security, in which all members would pledge to aid any other member that became the victim of aggression from those states that did not pursue peaceful conflict resolution (DiNunzio, 2006). But Wilson's vision never materialized.

Liberal theory met with serious setbacks between the world wars, as the Great Depression of the 1930s and the coming of World War II called into question its vision of what might be accomplished in world politics. Despite Wilson's leadership, the American Senate rejected membership in the League of Nations, the Great Depression produced a collapse of the global trade system, and the rise of authoritarian militarism in Germany, Italy, and Japan could not be contained by any notion of collective security.

The Great Depression served as a catalyst for an expansion of Japan's war with China in the early 1930s. Just a decade earlier, Japan pursued what they called

Shidehara diplomacy, a policy of extensive trade to gain access to the resources necessary for industrial production and markets for their goods. The ultimate objective was to ensure that Japan sustained the economic growth necessary for investments in military power, and in turn, security and autonomy in a threatening international system. But they did it peacefully. When the Great Depression hit, the United States responded by raising tariff barriers on imported goods with the Smoot-Hawley Act of 1930 to protect its own domestic manufacturing. With its continental scale, its rich natural resource base, and large population, American leaders decided they could weather this economic crisis best by relying primarily on their own territory. Great Britain followed the Americans' lead by creating the "imperial preference system" during the Ottawa conference of 1932, which provided low tariffs for products traded within the British Empire and among the Dominion countries, while raising barriers to goods from other parts of the world. Like America, Britain leveraged its expansive territorial control and access to meet the global trade crisis.

Among the great powers, Japan was the most vulnerable to this shock to global trade; it simply did not have a rich geographic base to fall back on. As a result, Japanese leaders concluded that violent imperial expansion was the only viable option for survival as an industrial power. Japan's war with China began with its invasion of Manchuria in 1931; it expanded its imperial war against China through the 1930s and eventually seized France's colonial possessions in Southeast Asia in 1940. The United States responded with increasingly tough economic sanctions that eventually included an embargo on American steel and oil imports, which was meant to compel Japan to withdraw its imperialist conquests. This simply fed a spiraling crisis and empowered militant voices in Japan calling for a final push to secure regional dominance across East Asia and the territory necessary for sustaining its economic and military power (Barnhart, 1987; Copeland, 2011; Iriye, 1990).

The coming of the second great power war in twenty years, and the emergence of the Cold War between the USA and the USSR after that war, led many in the field of international relations to decry the "utopianism," the "idealism," of early twentieth-century liberal thought. But the tragedy of mass violence and the escalating security risks of this century continued to inspire liberal theorists and policymakers to pursue initiatives that would stabilize some of the most dangerous features of world politics. Instead of accepting perpetual, high-intensity competition and war as inevitable, many practitioners turned to the logic and instruments of liberal theory for solutions to the problems of competition, war, and general human suffering. And in the ensuing decades, even if liberal theory has not swept these problems away, it has helped dampen the risks, as some of the examples below illustrate.

The creation of the United Nations system, of course, is among the most ambitious postwar initiatives. Despite the failure of the League of Nations after World War I, the devastation of World War II motivated a strong demand for an international organization that could facilitate coordinated efforts to prevent war and pursue a range of liberal social and economic goals. Its relevance to the role of military force in world politics is anchored by the UN's founding document, which draws from the logic of both realism and liberalism. For example, following the liberal impulse to



control violence and the logic of institutionalism, Chapter I of the Charter calls on member states to “refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state.” Chapter VI of the UN Charter mandates the peaceful settlement of international disputes and has been used to authorize dozens of peacekeeping missions over the decades.

Chapter VI, Article 51, sets out the rules on the use of force specifically; no longer is the right to use force the unquestioned sovereign prerogative of any individual state, unless a state is acting in its inherent right to self-defense against aggression and there is no time to seek approval or assistance from the international community. In all other cases that fall short of immediate self-defense, the United Nations Security Council, under Chapter VII, is the only international organ that can approve the legitimate use of force against anything it declares to be a “threat to international peace and security.”

The structure of the Security Council does acknowledge the realities of hard power in the international system (at least as it was perceived in 1945) when the five major allied powers of World War II – the United States, Great Britain, the Soviet Union, France, and China – were granted permanent membership and veto power over resolutions. But along with ten other member states that occupy regional seats on a rotating basis, the UN Security Council has no rival in terms of legitimating military force at the international level. While the goal was noble, power politics during the Cold War prevented the Security Council from playing the role intended at the founding. The first time Chapter VII of the Charter was actually used to authorize the use of “all necessary means” to turn back aggression was in November 1990 in response to Iraq’s invasion of Kuwait (Quigley, 1992). Forty years earlier, in June 1950, the UN Security Council authorized member states to use force to restore international peace after the North Korean invasion of South Korea, but this vote was taken without the Soviet delegate attending the meeting.

Since then, the most important debate over the role of the UN in the security realm has concerned the question of state sovereignty and humanitarian crises that might generate strong pressure for international intervention. “Sovereignty,” the foundational concept that organizes the very structure of the global political order, is itself the product of a historical moment of immense violence – the Thirty Years’ War that raged across Europe in the early seventeenth century – and the effort of leaders in the peace to establish rules that would limit the prevalence of warfare. As an institution, the rules of sovereignty were meant to protect territorially defined states that had the right to be free from external interference within their borders, interference that often came in the form of violent intervention and coercion, and the obligation to respect this right for others.

Interestingly, the same institution meant to control foreign state interference in domestic affairs, and the inter-state violence it can produce, has in recent decades come into conflict with the broader liberal values that prioritize individual human rights and freedom from repression. As a result, liberalism has prompted a movement to restrict the protections of sovereignty for political and military leaders accused of gross human rights violations, particularly genocide, and to legitimate



humanitarian military interventions meant to rescue populations suffering from the consequences of state failure even if they are not the direct victims of political repression (Power, 2003). Since the end of the Cold War, prominent cases of liberal interventionism, or at least demands for military intervention, have spanned the globe, to include among others, Somalia, Haiti, Bosnia, Rwanda, Kosovo, East Timor, the Democratic Republic of Congo, Liberia, Sierra Leone, Venezuela, Syria, Yemen, and Libya.

Despite its promise, the UN, like the League of Nations, has clearly fallen short of its founders' vision. In fact, realists point to the UN as an example of the continuing dominance of power politics that impede international cooperation. But better examples of liberal theory at work come in the form of the postwar international economic system and the European integration movement.

Even before WWII was won, allied governments were looking ahead to the postwar order. In 1944, economic planners met at Bretton Woods, in the American state of New Hampshire, to create a set of monetary rules and organizations that would foster free trade, economic development, and the stability of national currencies. It was inspired by one of the most important lessons of the inter-war period: Not only was the Great Depression of the 1930s, which brought mass unemployment, bank failures, plunging stock markets, and the collapse of international trade, a global economic catastrophe, the shock of this economic crisis also rippled into international security politics in dangerous ways. Postwar planners recognized that economic turmoil fed nationalist and militaristic ideologies in Europe, providing an opportunity for the Nazi Party in Germany to leverage domestic fears and frustrations to build popular support for its violent ambitions. So the goal of constructing a cooperative liberal trade and financial system after World War II was not merely to enhance economic prosperity, but it was essential for preventing a repeat of the devastating experience of the 1930s and early 1940s.

The Bretton Woods system created the International Bank for Reconstruction and Development, the forerunner of the World Bank, a global institution that supports economic development, and the International Monetary Fund, which helps control destabilizing fluctuations in the value of states' currencies. Two years after the war, a follow-on conference established the General Agreement on Tariffs and Trade, the forerunner to the current World Trade Organization (WTO), which not only created the rules for the open trade system, but it also created mechanisms for states to periodically update these rules for the increasingly complex global economy and to peacefully adjudicate economic disputes among them (Cohen, 1977; Dormael, 1978; Ikenberry, 2011; Maier, 1987).

While the Bretton Woods system was putting liberal principles to work for the global financial and trade order, within Europe and the trans-Atlantic community specifically an even more audacious scheme was launched to limit the scourge of great power conflict. The European integration movement in the years after World War II is often treated as merely an effort to build an effective alliance against the emerging Soviet threat. But as western political leaders looked ahead to the postwar period, the greatest threat many saw was that the cycle of war among European great powers would continue. Just as World War II followed World War I, the fear was that

World War III was just another generation away once Germany had recovered from defeat.

In response to this fear, the European integration movement was a peace project. It was a conscious effort by Europeans, particularly the French visionary Jean Monnet, as well as American leaders, to dampen or eliminate the underlying causes of the fear, uncertainty, and perceptions of threat produced by international anarchy and extremist politics that in turn had produced hundreds of years of rivalry, arms races, shifting alliances, and war. While integration developed in fits and starts over the decades after World War II, this movement was the vehicle for solving the security dilemma among European states. Considering the history of Europe, which has been called the “cockpit” of repeated great power wars for centuries, the European integration movement is nothing short of revolutionary in world politics.

The overarching security logic that best describes the various aspects of European integration has been called “security binding,” and binding is presented as a liberal alternative to traditional realist balancing logic. As a security scheme, balancing depends on the capacity to physically counter potential rivals. In contrast, binding is about bringing potential rivals together, integrating their political, economic, and defense relationships in ways that increase trust and produce the incentives for cooperation that come with mutual interdependence. G. John Ikenberry calls security binding “arguably the most important innovation in national security in the twentieth century” (Ikenberry, 2011, p. 183). A few specific policy initiatives help illustrate how it worked in practice.

In 1947, US Secretary of State George C. Marshall announced a large economic aid package for European states still suffering from the devastation of war and facing the risk that economic suffering could once again produce extremist political movements. “There can be no political stability and no assured peace,” Marshall declared, until European recovery gained momentum. But this was no simple scheme for doling out aid packages to America’s partners. Countries accepting support had to agree to a critical condition: They must collectively decide how every penny was to be spent across Europe, among friends and former enemies alike. The Organization for European Economic Cooperation (OEEC) was created to serve as an organizational vehicle for this task, and it embodied the shared interests and incentives for mutual gain made available by Marshall aid (Mastanduno, 1998).

An important European initiative that drew from the same liberal binding logic was the European Coal and Steel Community (ECSC), spearheaded by French Foreign Minister Robert Schuman in 1950. The ECSC integrated the coal and steel sectors of six Western European states. According to Schuman, “The pooling of coal and steel production,” most importantly the industries of France and West Germany, “will change the destinies of those regions which have long been devoted to the manufacture of munitions of war, of which they have been the most constant victims” (European Union). And in the decades that followed, the ECSC and the OEEC were succeeded by new bodies that expanded and deepened the ties among European states, from the European Economic Community to the European Community, to the European Union today.

One unusual example of security binding is the North Atlantic Treaty Organization (NATO), founded in 1949 in response to the threat posed by Soviet military forces in Central Europe and fears of the USSR's aggressive expansionist ambitions. NATO is a military alliance, so its core mission clearly falls within the balancing logic of realist theory. But its founders recognized that NATO had another purpose as well. It has also served as an organization that created an integrated defense relationship among former enemy states at a time of great uncertainty over whether Germany would pose the greatest threat in the years to come. Simply put, NATO solved the security problem for the West Germans themselves by binding them to the transatlantic community. This reduced the likelihood that Germany would again turn to militarism to face the pressures of an anarchic international system and the hard reality of its geographic vulnerability as a major power in the center of the European continent, facing potential threats from west and east. As Ikenberry has noted, "nowhere in the negotiations over the treaty was there an intention of creating a large transatlantic NATO bureaucracy or an integrated military establishment headed by an American general." Instead, American leaders believed NATO's purpose, like Marshall Plan aid, "was to lend support to European steps to build stronger economic, political, and security ties within Europe itself" (Ikenberry, 2000, p. 197; Schwabe, 1995).

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### **Summary: Liberal International Relations Theory in an Era of Renewed Great Power Competition**

For nearly two decades after the end of the Cold War in the late 1980s and the collapse of the Soviet Union in 1991, the champions of the liberal vision for world politics saw great promise in the democratization of former authoritarian states and the expansion of economic openness and international institutions around the world. President George H. W. Bush heralded the arrival of a New World Order marked by cooperation and collective action to defeat aggression and alleviate human suffering. British Prime Minister Margaret Thatcher was an early advocate of democracy as a source of peace. President Bill Clinton's first National Security Strategy called for "enlargement" of the liberal "zone of peace" through NATO and European Union expansion, focused on creating a "Europe whole and free" that included a new institutionalized relationship with a democratizing and reformist Russia. The meteoric rise of China's economy, made possible by its willingness to leverage the benefits of the open liberal trade system, was a promising sign that as it became more prosperous and more powerful, China would become a "responsible stakeholder" in a global order defined by liberal principles (Bush 1993; Lake 1993; Brands & Cooper, 2019).

In the 2020s, however, political leaders and scholars around the world assert that a new era of great power competition has arrived, and realist theory once again seems to provide insight into worrisome developments in the international system. The zone of liberal peace across Europe now spans the broadest geographic scope in its history, but realists argue that NATO and EU expansion has also triggered

Russian fears of encroachment. China has grown prosperous, and its dependence on foreign markets and investment opportunities will likely act as a constraint on dangerous behavior, but its increasing strength has also increased its willingness to challenge the United States and its allies in East Asia and the Western Pacific (Mearsheimer, 2014). Renewed interest in nuclear weapons as a tool of great power competition and the contest over China's territorial claims in the South China Sea provide dangerous flashpoints. Perhaps there is a role for liberal logic to keep a cap on the level of risk we face.

One important example deserves consideration. The logic of Neoliberal Institutionalism still has policy relevance for controlling nuclear weapons in the twenty-first century, and while not perfect, arms control initiatives during the Cold War demonstrate its feasibility. By the early 1960s, the United States and the Soviet Union, mortal enemies trapped in a spiraling arms race, in a rational assessment of their own security interests, recognized that they would be more secure if they cooperated to limit the many ways that nuclear weapons and weapons testing can proliferate. The first breakthrough was the 1963 Partial Test Ban Treaty, which to this day prohibits all testing in the atmosphere, in outer space, and in the ocean, thus limiting the ecological and health risks produced by nuclear detonations. This was followed in the late 1960s by the Nuclear Non-Proliferation Treaty (NPT), which remains the most important institution that legitimizes international efforts to prevent the spread of nuclear weapons to states beyond the original five that had nuclear weapons when the treaty was opened for signature (the United States, the Soviet Union/Russia, Great Britain, France, and China). While a skeptic can point to the self-serving nature of the NPT, which did not place any real disarmament demands on the existing nuclear weapons states, it continues to underpin the work of organizations like the International Atomic Energy Agency which monitors, inspects, and reports on nuclear activities by other states, while the treaty provides a legal and normative basis for the United Nations Security Council to hold states like North Korea accountable for violating its rules.

Beginning in the early 1970s, as the nuclear arms race between the United States and Soviet Union reached a frenetic pace, the Cold War rivals themselves turned to arms control to cap the most dangerous advancements in their arsenals. What followed was a series of negotiations and treaties that, while not ending the Cold War or eliminating competition in the nuclear weapons realm, helped stabilize deterrence and reduced the intensity of the threat. The key treaties included the Anti-Ballistic Missile Treaty (ABM) and the Strategic Arms Limitation Treaty (SALT I) of 1972, the Intermediate Range Nuclear Forces Treaty (INF) of 1987, which for the first time eliminated an entire class of weapons, and the Strategic Arms Reduction Treaty (START) of 1991 that actually reduced strategic arsenals by 80 percent (Arms Control Association).

The post-Cold War arms control record is mixed, to be sure. The United States withdrew from the ABM treaty in 2002, and it withdrew from the INF treaty in 2018, claiming that Russia was developing a new missile that should be prohibited under INF rules and that China, which is not party to the treaty, gains an unfair advantage while it fields weapons that should be banned. But more recently, even as serious

tensions continue to grow between Russia and the United States, these antagonists have renewed the New START Agreement, which first went into effect in 2011 to cap the total number of deployed land- and submarine-based missiles and heavy bombers, as well as the number of warheads allowed for each launch platform.

It is interesting to note that all nuclear weapon states (except for North Korea) are following the rules of another post-Cold War global arms control agreement, the Comprehensive Test Ban Treaty (CTBT), even though it is not officially in force. This includes major states that are not signatories to the treaty (like the United States) or have not ratified it (like Russia and China). It seems that self-interest and the fear of reciprocity, the core logic of liberal institutionalism, are at work bringing restraint in the testing of nuclear weapons, even though in a formal sense they are not obliged to comply. The United States first signed the CTBT under President Clinton in 1996, but it failed to gain ratification in the US Senate. President George W. Bush then removed America as a signatory. But despite pressure from scientists and administrators responsible for America's nuclear infrastructure, who have persistently argued in favor of renewed testing to check the safety and reliability of its weapons, every president since has rejected this advice. The United States has not conducted a nuclear test since 1992. Russia conducted its last test in 1990, China in 1996.

While direct evidence is hard to uncover, it is reasonable to hypothesize that each major power is holding back because its leaders know that as soon as any of them conducts a test, the others will follow with their own tests, ultimately making all nuclear weapon states less secure. Perhaps there are other issue areas in a world of great power rivalries that are still ripe for liberal rule-governed behavior in which states recognize the dangers of unfettered competition, that mutual interests might exist, and that self-restraint to hold others in check is a viable option as states seek security, prosperity, and a stable future.

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# Social Constructivist International Relations and the Military

Christine Agius

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## Abstract

Captured by Alexander Wendt's now-famous maxim "anarchy is what states make of it," social constructivism is the idea that the world "out there" is not given, as realists would argue, but rather, "socially constructed." In doing so, social constructivism places a focus on the importance of "mutual constitution": international politics is shaped by both structures, such as anarchy, or agents, such as states and other actors. Structures and agents influence each other. Moreover, social constructivism emphasizes social relations in global politics, and sees security and international politics as determined by ideas as well as material factors. The identity of agents such as states matter because identity helps determine national interests. As states interact with other actors in the international system, their ideas and identity can change over time, which can produce a more dynamic understanding of international relations. This chapter will take the reader through the key ideas of social constructivism – also referred to as "constructivism" in this chapter – showing how norms, culture, and ideas about identity shape actors, condition their relations with each other, and can impact the

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C. Agius (✉)

Department of Humanities and Social Sciences, Swinburne University of Technology, Melbourne, VIC, Australia

e-mail: [cagius@swin.edu.au](mailto:cagius@swin.edu.au)

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so-called “given” nature of international relations and transform understandings of power relations. Social constructivism can also help make sense of security and military phenomena, such as alliances and threat perceptions, or why states go to war. This chapter will also cover the different branches of constructivist thought and the main critiques of constructivism to highlight its key contributions and the problems it also raises.

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**Keywords**

Social constructivism · Norms · Culture · Identity · Mutual constitution · Military · War

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**Introduction**

In the “timeless wisdom” of realist thought, the story of international relations is that the world is structured by anarchy. This means that the absence of a central power over states produces a world of perpetual insecurity, or Hobbesian “state of nature” (see ► [“Realist International Relations Theory and The Military”](#) by Schmidt in this volume), with conflict and violence a constant possibility. Subsequently, states do what they can to secure themselves, which often means resorting to military force. Yet this dominant view of international relations was significantly challenged by Alexander Wendt in the early 1990s with the simple premise: “anarchy is what states make of it” (Wendt 1992, pp. 394–395). Wendt’s contention was that rather than see anarchy as a given condition of the international system, ordering relations and compelling states to behave in certain ways to secure themselves, anarchy, rather, depends on whether states “buy into” this view. Theo Farrell (2002, p. 50) explains this in the following way: “where actors are great powers, the social structure is an international system that gives meaning to great power and recognizes this identity in particular practices, such as the use of force against smaller states; through such practices, states – great and small – in turn shape the international system.” If the world is anarchic, Wendt argued, it is because states believe it to be so, and seek to secure themselves by the logic that anarchy produced. What if anarchy was *not* a given condition that ordered world politics? If it was not, then the international order and what security means could be something completely different. This suggests that there is something beyond the “timeless wisdom” of realism that offers only a tragic view of world politics that will never change.

The rise of social constructivist thought in international relations theory as part of the “fourth debate” (see ► [“International Relations and Military Sciences”](#) by Roennfeldt in this volume) represented one of those “break through” moments that challenged some of the orthodoxy and key assumptions that guided the discipline. Like its revision of anarchy as an ordering principle in international relations, constructivism also changed perceptions about the relationship between agents and structures, brought attention to how ideas matter as much as material factors, and how identity, norms, and culture shape global relations. This chapter will explore

what constructivism is, and its underlying claims and key influences, while comparing its core tenets to theories such as realism (see ► [“Realist International Relations Theory and The Military”](#) by Schmidt in this volume) and liberalism (see ► [“Liberal International Relations Theory and The Military”](#) by Silverstone in this volume). Throughout the chapter, reference will be made to constructivism’s epistemological (how we know it), ontological (what we know), teleological (what is the purpose), and methodological (the tools we use to study) standing, where it is located in IR theorizing, and what it can mean for understanding military phenomena (see ► [“Philosophy of Military Science”](#) by Sookermary in this volume). It will then consider some key criticisms of this approach and conclude with a short summary.

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## What Is Social Constructivism? Background and Key Claims

Social constructivism emerged out of key debates in international relations theory in the 1980s concerned with agents and structures and has come to be seen as the “fourth debate” in international relations theorizing, which pitches constructivist against rationalist perspectives (Fierke and Jørgensen 2001, p. 3). Although some debate exists over whether it is more of an approach rather than a theory (McCourt 2016, p. 476), its importance for international relations can be found in its emphasis on social relations between actors; how actors relate to each other shapes international politics. Constructivism has developed over the years and it is now possible to speak of it in terms of “generations.” The first generation is identified in the 1980s, where constructivism focused on agents and structures. The second generation’s focus on norms emerged in the 1990s and a third generation extends constructivism’s scope to bring in critical theory, emotions, and political psychology, among other approaches (See Steele (2017), Steele et al. (2019), and Kessler and Steele (2016) for recent advanced debates.) This chapter will concentrate on some of the main elements that have relevance for military studies.

Constructivism’s key influences come from sociological and philosophical perspectives on the nature of reality and phenomena, which brings knowledge, language, and social relations to the fore. The influence of Prussian philosopher Immanuel Kant (1724–1805) on constructivist thought can be seen regarding ideas about knowledge and objectivity, in that knowledge of the world is filtered through frameworks of understanding. For philosopher John Searle, language played an equally significant role. In Searle’s book *The Construction of Social Reality*, he opens with a puzzle that concerned him for a long time: “that there are portions of the real world, objective facts in the world, that are only facts by human agreement. . . things that exist only because we believe them to exist. . . like money, property, government, and marriages. . . These contrast with such facts as that Mount Everest has snow and ice near the summit or that hydrogen atoms have one electron, which are facts totally independent of any human opinions” (1995, pp. 1–2). Those facts that rely on human agreement (“institutional facts”) differ from “brute facts” (like mountains, for example), which do not need human institutions for their existence. A notable example that Searle uses to explain this is money. It is through

human agreement that a piece of paper, metal, or even cryptocurrency is seen as a form of “money,” which is assigned a certain value (Searle 1995, pp. 2–3) and recognized as a medium of exchange for goods and services. Its value also depends on the market, so it can go up and down, or buy more or fewer things, dependent on inflation, and other variables. The shared understandings given to objects are referred to as “inter-subjective” meanings, which Adler explains as “collective knowledge” (1997).

## Identity, Ideas and Mutual Constitution

At the core of social constructivism is the idea that international politics – and indeed human relations – are “socially constructed” rather than “given.” Its core ideas are based around three ontological positions relating to **identity**, **ideas**, and **mutual constitution**.

First, unlike realist theory which sees actors as “like units” which respond to external phenomena in the same way, constructivists argue that *who* actors think they are matters. **Identity** informs preferences and interests, so to understand why certain states behave the way they do on the international stage, paying attention to how their identities drive their interests and actions matters. Identities are formed through shared meanings and understandings of the world, which then brings in culture, “intersubjective” or shared meanings and norms and values. For neorealists, who take a structural explanation of international relations and argue that anarchy shapes world politics, states are “like units” – distinguished only by their distribution of power and capabilities – states were primed to behave the same way because the anarchic structure “instructs” them so. Whether a state is democratic or autocratic, for example, does not seem to matter for neorealists such as Kenneth Waltz (see ► [“Realist International Relations Theory and The Military”](#) by Schmidt in this volume), because the anarchic structure is what is important for understanding state behavior.

For constructivists, a focus on identity makes it possible to consider more deeply how domestic factors, ideas, discourses, cultures, and norms shape the interests of states and the choices states make. (It should be noted here that social constructivism is often seen as part of a broader set of theoretical approaches that are concerned with identity and discourses, such as ontological security and securitization. While it is beyond the scope of this chapter to adequately cover these approaches, the Baumann chapter in this volume discusses securitization; for works on ontological security that speak to international security and aspects of the military, see Mitzen (2006), Krahmann (2018), and Mälksoo (2018).) How shared culture and identity matters in international security can be illustrated with the example of nuclear weapons. How is it that western states like the UK, for example, do not fear thousands of nuclear weapons that the USA possesses, but worries about states like Iran or North Korea, who hold far fewer nuclear weapons? Constructivists say that to understand these sorts of questions, one cannot simply turn to material factors like military power – these do not explain why some states are seen as threats and others as

benign. What makes the UK feel “safe” in the matter of the USA’s nuclear arsenal is that these states have a shared identity – centuries of connection, friendship, shared beliefs and language, and similar cultures. The UK and the USA are part of NATO, so share alliance membership, but have also stood “shoulder to shoulder” in conflicts like Afghanistan and Iraq in response to global terrorism, which both states understand to be an existential threat to their “way of life.” Meaning is socially constructed – this epistemological claim suggests that depending on one’s position and perspective, knowledge and meaning produce different interpretations (Guzzini 2005, p. 498).

The second big claim of constructivism is that **ideas matter** – with realist theorizing, material factors take precedence. For neorealists, the relative material capabilities of states determine hierarchy and power in international relations. While constructivists do not deny the importance of material factors, they also argue that ideas also matter, and in some cases, matter more. An example of this can be seen in the realist understanding of behavior in warfare. While neorealists argued that attacking Iraq was not in the national interests of the USA and that containment was more effective (Mearsheimer and Walt 2003), neoconservative hawks determined otherwise. For neoconservatives, Saddam Hussein represented a threat because he was seen as an irrational actor that has been hostile toward the USA (Tunç 2005). His refusal to allow the UN weapons inspectors into Iraq during the buildup to war in 2003 was seen as irrational to many in the west. The superior military capabilities of the USA were a significant material advantage that *should* have compelled Iraq to avoid invasion. Yet Saddam did not want to appear weak to enemies such as Iran (Allen 2009).

Under a constructivist lens, the primacy of state survival in realist thought also undergoes reconsideration. In more historical examples, states that chose neutrality during times of war did so against strong material factors that would have potentially granted them safety and survival had they opted to join one side or the other. The realist reading of Thucydides’ account of the Melian Dialogue (431 BC) in the Peloponnesian War is seen as the classic illustration of power politics. The Athenians demand that neutral Melos side with them against Sparta. For the Athenians, the refusal of the Melians – the much weaker party – to submit and their preference for neutrality was an affront to their power. Only those with equal power could make such demands, and the Athenians make good on their threat to destroy the Melians, declaring that “might is right” and “the weak suffer what they must” (Thucydides 1951, pp. 331–336). Realists have traditionally seen neutral states as weak and small, responding only to the external anarchic realm (Agius 2006). But a constructivist reading of the Melian Dialogue (Lebow 2001) shows how ideas rather than material factors played a role in the decision of the Melians, even if the outcome was grim (Agius 2006). Despite their position of material weakness, the Melians argued that freedom and justice are more important. During the First World War, Belgium, driven by a sense of honor, chose to fight Germany even though the Belgians risked and experienced catastrophic consequences (Steele 2008b).

Third, rather than see international relations as an anarchic realm where the lack of a central authority above states guarantees security, constructivism makes the

claim that agents and structures are **mutually constituted** or shaped by each other. As Onuf states: “Constructivism holds that people make society, and society makes people. This is a continuous, two-way process” (2013, p. 4). This matters because it suggests that international relations is more dynamic rather than fixed. Anarchy is not a given of the international system. Actors can see and interpret the world and approach it differently – therefore, “anarchy is what states make of it.” For Wendt, different “cultures” of anarchy were possible, which meant that the neorealist idea of a self-help system was limited to just a Hobbesian version that depended on military power for security. But Wendt also identified a Lockean culture that demonstrated some restraint in warfare and a Kantian culture that was guided more by cooperation (Wendt 1999). The logic of anarchy is but one way in which it is possible to imagine how the international system works.

This is a different way to think about and imagine the international realm beyond the narrow confines of rationalist power prescriptions. In this regard, although posited by Wendt as a “via media” (1992, 1999) or “middle ground” (Adler 1997) with rationalism, constructivism offers a different view of key concepts like power. **Power** in the constructivist sense is less concerned with material power but sees ideas and discourses as powerful; power can be exercised in different ways. In discursive terms, language can convey meaning and associations, and define what is considered within and outside the norms (see ► [“Poststructuralism in International Relations: Discourse and the Military”](#) by Baumann in this volume). Discourse has power because language can shape how we view phenomena – simple acts such as defining a conflict as one of terrorism, for example, then calls into effect a range of policy options associated with countering terrorism.

Contrastingly, neorealist prescriptions of power see it as hard, material, military power (such as large military forces or superior weapons) and are concerned with its distribution in the international system. Constructivism sees power in terms of what it does and means (Guzzini 2005); ideas have power (e.g., that democracies are “good”). Power is influenced by norms, ideas, and practices; in a constructivist reading, power depends on how it is used and what it means in the interaction of states. Whereas Morgenthau’s classical realism described *interests in terms of power* as a truism of international relations, in empirical terms, power might not be a driver for states interests and actions. Not all states interpret power in the material or hierarchical sense. Ideational or even soft power – the influence that is exerted that does not rely on “hard power” but rather attracts others to ideas and values (see ► [“Realist International Relations Theory and The Military”](#) by Schmidt in this volume) can be effective in global politics and choosing to go to war over ideas rather than material gains – or even to not take advantage of material gain and an increase in power, serve as examples. In this sense, power is a social category.

## Norms and Culture in Constructivist Thought

How are self-understandings and identity constituted in the international realm? To dig deeper into what makes an agent or what structures global politics,

constructivists look to norms and culture to make sense of what represents or guides behavior and how ideas of self inform that. For realists, the material structure of the world matters. But for constructivists, it is social structure that is important (Farrell 2002, p. 52). Central to constructivism are concepts such as norms, institutions, and culture. Norms are shared beliefs, knowledge, and practice about the world – in this sense, they are *intersubjective*, meaning a norm can be understood and shared amongst actors. Norms are also expectations about behavior (these are called “regulatory norms” because they define acceptable behavior). A key illustration here is the norm of human rights, which is widely accepted by actors (Katzenstein 1996). The constructivist focus on norms is important for understanding teleological aspects of its idea of international relations – that ideas can change world politics (Hopf 1998). For example, norms can challenge practices and beliefs that are seen to be no longer fit for purpose. Norms that challenged ideas like genocide, apartheid, the use of nuclear weapons, how to treat prisoners of war, how combatants are defined, and the role of women in armed forces emerge in opposition to existing norms. They do not simply replace “bad” norms but become established through what Finnemore and Sikkink (1998) call a “norm cycle” where new ideas and shared understandings emerge, become instituted and normalized. An example of this can be seen in the case of the International Criminal Court (ICC), which was created in 2002 to hear cases of war crimes. Even though it was opposed by the USA, which did not want to subject its military forces to external war crime trials, it is an example of a “constitutive norm” (which creates “new actors, interests and categories of action” (Björkdahl 2002, pp. 15–16). Even so, more recently there has been some rejection of the ICC by a few African states, signaling that some states are unwilling to accept its authority. A further example of norm erosion can be seen in the norm against the use of torture. In the context of the global war on terror, US efforts to extract intelligence from suspected terrorists led to the use of “enhanced interrogation techniques” which was widely seen to have abrogated or contested the global prohibition on the use of torture (Steele 2008a; see also Birdsall (2016) who argues that it worked to strengthen the anti-torture norm).

The nuclear taboo is another example of a regulative norm (prescribing non-use), but it was also a constitutive norm (associating the taboo with the idea that “civilized” nations would not resort to using nuclear weapons) (Tannenwald 1999). In the 1980s and 1990s, efforts to wind back the proliferation of nuclear weapons – which by this stage had reached staggering proportions, particularly in the USA and USSR – prompted scientists and nuclear experts, civil society organizations, and other actors, to form what is called “epistemic communities”. Epistemic communities are described by Peter Haas as “networks of knowledge-based communities with an authoritative claim to policy-relevant knowledge within their domain of expertise.” They share intersubjective knowledge and beliefs and a “common policy enterprise,” tackling specific problems in relation to their professions (2016, p. 5) to push for norm change around nuclear proliferation and to reduce the arsenal of the superpowers. This had some success. But the nuclear issue is also important because it shows how competing ideas about norms co-exist or contrast – for example, former US President Donald Trump tried to change the norm around the use of

nuclear weapons, arguing for the ability to use “low yield” nuclear weapons and the 2018 Nuclear Posture Review returned to the idea that nuclear superiority mattered (Tannenwald 2018). This was seen as a backward step and a challenge to the taboo norm that had developed over preceding decades. At the same time, the International Campaign to Abolish Nuclear Weapons (ICAN) had successfully pushed for the UN to adopt the Treaty on the Prohibition of Nuclear Weapons in 2020.

The scope of military conduct can also be institutionalized, and constructivism provides a way to understand such processes. An example here is in what is generally called the laws of armed conflict, such as the Geneva Conventions, which sets the rules for how victims of war are to be treated, and the Hague Conventions (1899 and 1907), which addressed the conduct of war, such as the types of weapons permissible in warfare. The Geneva Convention (1949) is an example of an “international regime.” It is a social institution with norms, rules, and procedures to govern how civilians and combatants should be treated in war. Comprised of a series of conventions that go back to 1864, it is now a part of customary international law, so it applies to all states during warfare. Violation of the Geneva Conventions constitutes a war crime. While realists would argue that decision to go to war are based on rational state interests, constructivists would argue that the Geneva Convention represents the idea that war is a social and cultural practice and driven by moral considerations. As Tannenwald says, “[e]ven as states pursue their interests, they do so within a normative structure” (2017, p. 17). Moreover, the Geneva Convention is an example of both a regulative and a constitutive norm, in that it not only proscribes state behavior but established a new international normative order, creating expectations for international behavior. All of this came about through processes of socialization and persuasion, where interested groups such as NGOs, epistemic communities, and other actors not only successfully changed the norm around the treatment of civilians and combatants in warfare but instigated this norm as part of identity, and how states define right behavior. Of course, norms can be subjected to revision or even reversed. When the Bush administration introduced the category of “unlawful enemy combatant” in the global war on terror, these individuals were not afforded the protections under the Geneva Conventions (Tannenwald 2017, pp. 18–20; see also Katzenstein 1996).

Likewise, understanding sovereignty means recognizing the principle of non-interference in another state’s internal affairs, recognition of a state as an entity and associated rights that come with that: “all states recognize each other as sovereign, despite the huge differences in their ability to exert internal control and exercise international power” (Farrell 2002, p. 54; Wendt 1992; Hopf 1998). But norms are never static and this meaning has also changed over time – for instance, with the rise of Responsibility to Protect (R2P), sovereignty as an institution has become contingent on states fulfilling certain criteria – such as not committing human rights abuse. Norm shift around the idea of sovereignty can be seen in the pillars of R2P that say that if a state cannot or will not stop human rights abuses within its own territory, other states have a compelling reason to intervene. An example of this can be seen in the case of Libya in 2011, which is broadly hailed as a successful R2P intervention. As Luke Glanville illustrates, while there were



favorable conditions to ensure a successful R2P intervention (Gadaffi had made clear threats that evoked calls for genocide, the League of Arab States wanted international action and Libya had few allies), “[E]ven those states that refused to endorse the resort to military force...recognized the weight of the imperative to protect Libyan civilians...even if they disagreed over the means with which to do so” (2016, p. 193).

Likewise, culture plays a significant role in international security. Not all states respond to external phenomena in the same way, which invokes a need to consider how domestic and cultural factors shape the identity and interests of actors. Culture can refer to symbolic or evaluative standards that guide relations and provide meaning. This is particularly relevant to military studies in terms of understanding the strategic culture of specific states: culture can have an important influence on how states see security, how they interpret threat and train and organize their military forces. Germany and Japan, for example, had antimilitaristic strategic cultures after the Second World War which impacted their military engagement and organization (Berger 1996; Hagström and Gustafsson 2015). The strategic cultures of states are not the same: they are guided by “perceptions, beliefs, ideas and norms” that determine how states view the international system and how they use military force and priorities (Neumann and Heikka 2005, p. 6). Even among “security communities” such as the Nordic states, different strategic cultures can be found because they are informed by a range of historical and cultural experiences, with different experiences of war and conflict, membership of alliances, and other factors (see special issues of *Cooperation and Conflict* (2005) and *Global Affairs* (2018) for further discussions).

Seeing the world in this way – as mutually constituted, driven by the interests of actors which relies on their ideas of themselves and others, and their approach to phenomena – brings about different possibilities in international relations and security. In this sense, under a constructivist lens, key concepts like sovereignty and power can take on different meanings compared to how they are understood in realist frameworks or defense-oriented establishments.

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## Social Constructivism and Military Studies

Constructivism can produce richer understandings of the very basic questions that construct military studies: enemy perceptions, how identity drives threat/amity/cooperation in international relations, how states and actors respond to threat and the meanings that certain types of warfare involve, the stories told about war and what it means to be secure. Rather than see security and conflict in the same way, actors will interpret and pursue security based on the ideas, norms, identities, and values that have meaning for them. How militaries assess and interpret threat can be related to culture, intersubjective meanings, and social networks and understandings. Constructivists also emphasize how domestic norms and values play a role in how states and their militaries approach conflict or understand the causes of conflict. While states may choose to participate in war – or not – for strategic or material



reasons, it is often ideational justifications (i.e., related to justice, values or existential threat) that provide the compelling argument for or against war.

This also goes to the foundation of questions of the causes of war. As Farrell tells us, liberals and realists do not agree on what prevents war – is it democracy (as liberals would contend?) or alliances (as realists would argue?). Constructivism can explain how identity shapes interaction in the international realm – for instance the assumption that when states regard each other as liberal democracies they are less likely to go to war with each other. This goes against realist reliance on a world structured by anarchy that compels states to behave in certain ways, regardless of what sort of states they are (Farrell 2002, pp. 66–67).

Constructivism is relevant to military studies in numerous ways. Consider the shared norms that define military conduct and the institutions that have evolved around military practice; from the Geneva Conventions to the classic texts on warfare that are part of military training, a process of social interaction is taking place where norms are learned, and culture and identity are shaped. Recent efforts to ensure gender equality in militaries represent a normative shift, affecting operations and culture. In military exercises with other nations, states share practices and ideas and in doing so, learn from each other. This social learning aspect differs from realism's prescriptive approach that says nations will follow the strongest militaries to develop their strength and technological prowess – with the anarchic structure of the international system guiding this logic. For liberals, the belief that liberal ideas such as democracy and the free market are ideas to be shared to make the world a better place suggests a transfer of ideas rather than an exchange of ideas. How militaries assess and interpret threat can be related to culture, intersubjective meanings, and social networks and understandings. Constructivists also emphasize how domestic norms and values play a role in how states and their militaries approach conflict or understand the causes of conflict.

Constructivist ideas are present when attention is turned to alliances and security communities. Writing in the 1950s, Karl Deutsch differentiated between amalgamated and pluralistic security communities, with the former referring to a security community with a shared government, and the latter involving an integrated yet separated political structure. Trust, collective identity, shared norms, and intersubjective meanings are important for alliances and security communities, helping to ensure collective vision and purpose (Adler and Barnett 1998). States may join military alliances to bandwagon with stronger powers, as realists tell us. But some states refuse to do this, even if it is in their material interests to do so (see the example of neutral states in this chapter). Moreover, military alliances are increasingly not just about physical security but about binding together states with shared interests, identities, and norms. As Koschut (2014, p. 525) explains, this can “transform the behaviour of states from a self-help manner to trust-building.” Think here about realist logic at the end of the Cold War – with the demise of bipolarity, NATO should have gone the same way as the Warsaw Pact. After all, these were Cold War institutions whose purpose was now over with the end of superpower politics. But NATO transformed itself into something more than a military alliance. Its 1999 Strategic Concept altered the organization from a Cold War alliance to something

more akin to Deutsch's idea of a security community that was based on common values, norms, and identity, making democracy and human rights central. It brought former Warsaw Pact nations into its fold and strengthened convergence around normative issues such as human rights through social learning (Gheciu 2005; Fierke and Wiener 1999). Moreover, how NATO made this successful transition and ensured its survival relied on the dominant ideas about how the Cold War ended. Where liberals would declare that the west "won," proving capitalism and democracy were the only workable ways to organize societies, in a constructivist reading, the end of the Cold War was largely down to the changes that were taking place in the former Soviet Union under Gorbachev (Risse-Kappen 1994).

Constructivist explanations of different phenomena related to the military can highlight how norms and identity come into play. The growth of Private Military Companies (PMCs) or Private Military Security Contractors (PMSCs) in the 1990s and their increased use in conflicts has been a consequence of a range of different factors: increasing neo-liberalization, cuts to defense budgets and a desire for states to outsource security. Norms and regulatory instruments around the use of PMSCs and in what capacity they are used have emerged with the view to regulating them (Percy 2016, p. 221). A constructivist lens on PMCs, however, reveals how questions of national identity can also be central to their use. Hilde van Meegdenburg argues that in the case of Denmark, the use of PMSCs has been limited because it is not seen to align with Danish values. Denmark exhibits of "soft" form of neoliberalism compared to that of the USA or UK, affecting views of the role of the market in terms of outsourcing security; moreover, Denmark has "hard" commitments to international humanitarian law which "is likely to have tempered" direct engagement of PMSCs (2019, pp. 35–36).

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## Criticisms of Social Constructivism

While constructivism has made significant inroads into IR theorizing, it does not mean that it is unproblematic or immune from criticism. Critiques of constructivism tend to come from three areas: rationalist criticisms, issues over how constructivists see identity, and finally, criticism that constructivism is apolitical.

Rationalist critiques relate to constructivist methodology and epistemological claims. These criticisms are predominantly about where constructivism claims to fit in IR (as the "middle ground" between rationalist and reflectivist approaches) and its methodological commitments. Conventional constructivists like Wendt see similarities between constructivism and rationalist perspectives and methodologies. One of the big problems for rationalists, (When considering critiques of constructivism, it is important to note that those critiques are guided by the underlying epistemological and ontological positions of rationalist or other forms of theorizing.) for example, is that ideas and norms are hard to "test" empirically (Moravcsik 1999); they are intangible things that are difficult to measure or quantify, and it is hard to know if they played a significant role in affecting behavior (Farrell 2002, p. 60). What if behavior was due to factors other than norms or ideas? This criticism over

methodology, it should be noted, does not wholly apply to the conventional strand of constructivism, which Wendt says can employ positivist scientific methods to verify or falsify claims (Wendt 1999); for example, to know something about a state's military culture, one could look to opinion polls, regulations, training manuals, and the curricula at military academies that can provide data or information about how ideas and norms inform approaches to military organization and culture (Farrell 2002, pp. 60–61).

Second, there is a division between what is generally called conventional and critical constructivism (Hopf 1998), largely over questions of state centrality and treatment of identity. Wendt tends to view state identity in a singular way which can omit its complexity. Critical constructivists prefer to examine state identity in terms of its wider story (Fierke and Jørgensen 2001). For example, when considering what national identity means for a state like the UK, critical constructivists would include “forgotten” experiences or identities that make up its multicultural society, rather than just define British identity as white. Critical constructivists would seek to include different identities in how they understand “the nation” and present a more complex picture of what identity means and how it is contested and can be deconstructed (Fierke 2001). Critical constructivists pay greater attention to issues of power and dominant discourses that construct “national identity.”

Third, critical scholars argue that constructivism is deeply flawed because it is apolitical, does not adequately analyze categories such as norms, or simply resurrects rationalist ideas. Identity and culture can be problematic categories and distract from other factors that can explain international relations, such as capitalism or patriarchy (Kurki and Sinclair 2010). And while the focus on norms is important, there is an overwhelming tendency to examine “good norms” – there's often the assumption that norms are “good” or ethical without critically analyzing what makes them “good” and what they mean for international change (Erskine 2012; Kowert and Legro 1996). Moreover, for some, constructivism is problematic because it is seen as apolitical and its efforts to form a “via media” with rationalism bring the state back in (Weber 1999; Zehfuss 2002). Constructivism's overwhelming focus on the state and state agents obscures other actors and processes. Conventional constructivism is not interested in “replacing one reality of world politics with another. Rather it seeks to explore how the current reality evolved” (Farrell 2002, p. 59).

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## Summary

Constructivism has provided a broader approach to understanding international relations and security beyond rationalist frameworks. Doing so has opened up the field to bring in different explanations of global politics that can delve deeper into how culture and identity play a role in determining state interests. Moreover, one of constructivism's strongest contributions has been in relation to the agency-structure debate, showing how mutual constitution provides a different reading of world politics and international *relations* but also opens the possibility for change. In this sense, constructivism is really at its core a social theory of international relations

because the focus on identity and interactions show how clashes and cooperation manifest in the global arena.

While arguments remain about constructivism's ontological commitments and efforts to build a bridge between rationalist and reflectivist approaches, its relevance for military studies can be widely seen in terms of how it can broaden thinking about how to see and respond to other actors in terms of security and cooperation. Understanding how ideas about danger and threat are socially constructed, and how states form social relations in the international system is a key starting point in discussions about global security. The way in which issues are constructed and interpreted as threatening can also depend heavily on identity and views of the external realm. While some of the major criticisms of constructivist thought should be at the forefront when considering security and military problems through this lens, the potential to see the world in more dynamic terms is one of constructivism's leading contributions. This dynamism, it should also be noted, may not always be "positive" – ideas about security can also regress or become less normative or progressive. Nonetheless, constructivist approaches to identity, norms, and ideas about the world and its social relations can impact understandings of what it means to be secure.

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Zehfuss, M. (2002). *Constructivism in international relations: The politics of reality*. Cambridge, UK: Cambridge University Press. (A vital critique of conventional constructivism that uses the case study of Germany and the debates to join in military interventions outside the NATO area).

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# Environmental Stress in Military Settings

Wendy Sullivan-Kwantes, Matthew Cramer, Fethi Bouak, and  
Leonard Goodman

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## Abstract

During military training and operations, exposure to extremes of noise, temperature, humidity, pressure, or acceleration can induce levels of physiological strain that degrade cognitive and physical capabilities, threaten health and safety, and affect behavior and performance. The overarching purpose of this chapter is to discuss the impact of environmental stress on military personnel. Because each of the aforementioned stressors induces disparate effects, each section addresses a unique stressor in terms of (i) the nature of the threat, (ii) physiological and biomedical effects, (iii) the impact on performance, and (iv) management strategies. The evolution of next-generation wearable biosensors, smart performance algorithms, and scientifically based operational training methods including stress

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W. Sullivan-Kwantes (✉) · M. Cramer · F. Bouak · L. Goodman  
Defence Research and Development Canada, Toronto Research Centre, Toronto, ON, Canada  
e-mail: [Wendy.sullivan-kwantes@ecn.forces.gc.ca](mailto:Wendy.sullivan-kwantes@ecn.forces.gc.ca); [Wendy.Sullivan-Kwantes@drdc-rddc.gc.ca](mailto:Wendy.Sullivan-Kwantes@drdc-rddc.gc.ca);  
[Matthew.Cramer@ecn.forces.gc.ca](mailto:Matthew.Cramer@ecn.forces.gc.ca); [Matthew.Cramer@drdc-rddc.gc.ca](mailto:Matthew.Cramer@drdc-rddc.gc.ca);  
[Fethi.Bouak@ecn.forces.gc.ca](mailto:Fethi.Bouak@ecn.forces.gc.ca); [Fethi.Bouak@drdc-rddc.gc.ca](mailto:Fethi.Bouak@drdc-rddc.gc.ca);  
[Leonard.goodman@ecn.forces.gc.ca](mailto:Leonard.goodman@ecn.forces.gc.ca); [Len.Goodman@drdc-rddc.gc.ca](mailto:Len.Goodman@drdc-rddc.gc.ca)



inoculation exposure that will contribute to improved training, adaptation, and tolerance to these operational stresses is discussed.

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**Keywords**

Stress · Behavior · Cold · Heat · Noise · Hypoxia · Acceleration · Human performance · Cognitive

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**Introduction**

Wars are fraught with action, turmoil, danger, and unpredictable situations, all of which cause varying types and levels of stress that can impact warfighters' performance. Stress can be described as a measurable physical, biological, or cognitive response to a stressor – a stimulus or event that is perceived as a threat, which results in a response that affects the human's physical or cognitive performance and well-being (Lloyd and Havenith 2016; Kavanagh 2005). If the stress continues over an extended period, it can result in long-term physical and/or mental injuries (Lloyd and Havenith 2016; Kavanagh 2005).

Stress can impact how humans behave. Depending on the nature of the stress, behavior can be affected in either positive or maladaptive ways and can be immediate or delayed, compromising future tasks (Tiwari 2011). How behavior is affected depends on several factors including one's personality, personal experiences, and training. Training (as we discuss later in this chapter) is one way to positively influence the behavioral responses to a variety of stresses and is extremely important in the military context.

While this chapter focuses on environmental stressors, it is worth mentioning that other common stressors, such as psychological (e.g., past trauma (Tiwari 2011)), biological (e.g., fatigue), social (e.g., interpersonal conflicts (Lazarus and Cohen 1977)), and cognitive stressors (e.g., mental load (Tiwari 2011)) have the potential to negatively affect performance. Such stressors can happen in conjunction with environmental stressors and may have an additive effect on stress experienced by a person. The full understanding of the impact of multiple physical and cognitive environmental stressors is still being developed (Lloyd and Havenith 2016; Tiwari 2011) because it is not always clear how the factors will interact or if they tend to be additive in nature. These stressors can also have emotional and/or behavioral consequences in common that impact human performance. In sum, external environmental stressors can impact performance differently and the resulting effect on human performance can be more serious when combined with other, non-environmental stressors.

Environmental stressors include a variety of physical stimuli, including noise, temperature (heat and cold), pressure (hypobaric [altitude] and hyperbaric [underwater]), 24 h darkness or light, and vibration that can alter a person's ability to function or survive. It is important to note that stress can sometimes be beneficial to human performance, and some research reports performance can be positively

correlated with stress to a point; however, after that point, performance starts to suffer (Tiwari 2011). Moderate levels of stress have been argued to increase performance by providing just enough stimulation to encourage alertness, individual effort, and motivation whereas too much or too little stress can be associated with decreases in performance (Kavanagh 2005). How stress affects behavior is not limited to the individual – stress affects group behavior too. Stress can be a negative influence on how groups function, something important to consider in a military context where group work is common (Kavanagh 2005).

Below we will briefly introduce several environmental stressors typically experienced by military personnel and the impact that these stressors have on human performance. Each section addresses a unique military stressor in terms of (i) nature of the threat, (ii) physiological and biological effects, (iii) the impact of these stressors on performance, and (iv) management strategies.

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## Noise

Although knowledge of noise as an environmental stressor can be traced back for centuries, it is only in the past few hundred years that population growth and industrialization has drawn attention to the true impact that noise has on health and well-being (Münzel et al. 2018). In addition to the regular ambient noise to which people are exposed like traffic, airports, restaurants, and other public spaces, military personnel are exposed to noise in a variety of job-relevant tasks and environments during training or deployment. Military personnel may also be exposed to more intense sounds than any other occupation (Jokel et al. 2019).

Whether it is the sound of a large aircraft engine, naval ship, command center chatter, bullets, or explosives, noise from military environments, many of which exceed noise standard limits (Jokel et al. 2019), can impair sleep, communication, vigilance, learning, and can be harmful to health (Goines and Hagler 2007). There are several types of noise that can cause stress to military personnel. *Impulse noise* refers to an exposure to explosions or weapons fire, including small firearms such as rifles and shotguns. Other firearms (like machine guns), engines, vehicles, or aircraft create what is referred to as *steady-state noise* (Nakashima and Farinaccio 2015). Impulse noise can cause potentially permanent hearing damage with one or few exposures, whereas the damaging effects of steady-state noise on hearing can occur as a result of long-term exposure (Nakashima and Farinaccio 2015; Keller et al. 2017).

The stress caused by excessive noise can result in several issues of varying impact depending on the situation. Excessive noise can hinder everyday communication because of degraded speech comprehension and signal distortion causing communication delays and missed messages or orders. Excessive noise can also have negative impacts on cognitive ability by disrupting concentration and causing an overall reduction in one's ability to sustain attention (Jokel et al. 2019). There are also non-speech related auditory consequences such as an impaired ability to locate sounds during combat (Nakashima and Farinaccio 2015). Finally, long-term

exposure to excessive noise can cause permanent hearing loss and tinnitus (Jokel et al. 2019; Nakashima and Farinaccio 2015; Keller et al. 2017).

Hearing loss in the military population is the second-most prevalent service-related injury (Yong and Wang 2015). As a potentially preventable injury, prevention efforts through adequate hearing protection and modifications for quieter workspaces will not only improve communication performance during operations or training, and help ensure awareness for environmental cues such as weapon fire, alarms, and other important communications, but will help to retain personnel and prolong the careers of highly trained military personnel (Nakashima and Farinaccio 2015).

Behavior modification is common under environmental noise situations where soldiers will have to change how they conduct their work, for example, by making requests for clarifications and repeated messages to accomplish their tasks (Jokel et al. 2019). Similar behavior modifications to other environmental stressors can be helpful or potentially harmful by leading to unwanted consequences. For example, depending on the situation, wearing hearing protection could impede situational awareness for soldiers in the field by limiting their ability to communicate or to hear external threats such as the proximity and direction of enemy fire (Keller et al. 2017).

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## Cold Stress

Cold weather injuries, including hypothermia and frostbite, have been an environmental cause of stress to military operations for centuries. During World Wars I and II and the Korean War, for example, thousands of soldiers suffered from cold weather injuries and even death due to the cold (Candler 1997). More recently, cold weather injuries have been sustained by US and Canadian troops during training exercises in cold climates (Candler 1997; Sullivan-Kwantes et al. 2017). Such injuries can result in the loss of personnel available for missions and can cause long-term, life-altering injuries like amputations or, in some cases, death.

Cold weather injuries can occur when tasks are performed under conditions of cold air, rain, wind, or water immersion. Excessive cooling can lead to impaired manual performance. With extreme cold exposure, a decrease in core temperatures can result in hypothermia (a core temperature below 35 °C), symptoms and consequences of which are shown in Table 1.

The class of injuries referred to as *freezing cold injuries* include frostnip and frostbite. Frostnip is a mild cold-weather injury characterized by superficial freezing of the skin that results in numbness but no permanent damage. Research does indicate, however, that one's susceptibility to frostnip may increase the risk for frostbite (Gorjanc et al. 2019). Frostbite occurs when tissue reaches approximately  $-0.55^{\circ}\text{C}$  but can occur at even higher skin temperatures depending on how long the tissue is exposed to cold (Handford et al. 2014). Early signs of frostbite are pain and numbness, a white and waxy appearance, and a hard "wooden" texture.

A non-freezing cold injury occurs with sustained exposure to cold and wet conditions for several hours or days. Non-freezing cold injuries can involve numbness, swelling, pain, and sensory issues (Vale et al. 2017). Historically, chilblains

**Table 1** Core temperature and associated symptoms during cold stress (Department of the Army 2005)

	Core Temperature (°C)	Symptoms
Normothermia	37.0	
Mild hypothermia	35.0	Maximal shivering; elevated blood pressure
	34.0	Amnesia, dysarthria; poor judgment
	33.0	Ataxia; apathy
Moderate hypothermia	32.0	Stupor
	31.0	Shivering ceases; pupils dilate
	30.0	Cardiac arrhythmias; reduced cardiac output
	29.0	Unconsciousness
	28.0	Ventricular fibrillation likely; hypoventilation
	27.0	Loss of reflexes and voluntary movement
Severe hypothermia	26.0	Acid-base disturbances; no response to pain
	25.0	Reduced cerebral blood flow
	24.0	Hypotension; bradycardia; pulmonary edema
	23.0	No corneal reflexes; areflexia
	19.0	Electroencephalographic silence
	18.0	Asystole
	16.0	Lowest temperature from which an adult survived

(perniosis) and trenchfoot have been the main non-freezing cold injuries affecting military personnel (Vale et al. 2017) and are still a concern because they significantly impact human performance and, in some cases, employability in the military. Surprisingly, clear diagnostic criteria for non-freezing cold injuries are still being debated by subject matter experts (Vale et al. 2017).

One of the major human performance concerns when operating in the cold is the loss of manual dexterity, which declines precipitously once hand and finger temperatures fall below ~15 °C (Schiefer et al. 1984), causing the largest effect on tasks requiring fine finger dexterity (Castellani et al. 2018). From an operational perspective, having cold fingers may negatively impact the activities required to keep a mission on track (like equipment repairs or medical procedures) and one's ability to handle weapons.

It is unclear from current research how cold stress affects cognitive performance (memory, reaction time, vigilance, and attention) for military personnel – possibly because the operational definition of “cold” can differ across studies. Some studies have found little to no difference in cognitive performance in cool (not cold) environments (Martin et al. 2019). Other research has reported both improvements and impairments to cognitive performance in the cold (Martin et al. 2019). Military task performance, such as target detection, has not been shown to be negatively impacted by the cold (Martin et al. 2019). Cold can introduce psychological challenges that impair human performance. As noted by Nindl et al. (2018), a military member's psychological resilience, combined with their level of training, experience, physiological fitness, behavior, equipment, and effectiveness of leadership,

affect the ability to cope with operational stress. Success for the military means not only surviving but adapting to the cold to retain effectiveness.

There are several interventions that may help to combat cold stress. Behavioral responses to increase body heating are the most common (increasing physical activity or building a fire) and/or reduce body heat loss, (adding more protective clothing or seeking shelter). There is some evidence to suggest that supplements, such as tyrosine and caffeine, may help combat the negative effects of cold on cognitive performance (Taylor et al. 2016). However, when considering the impact of cold on cognitive performance during military operations, one must consider other factors, such as sleep deprivation, dehydration, and nutrition (due to an inability to prepare food properly), which may compound the impairment. Therefore, our understanding of the effect of cold on cognitive performance for military personnel needs to be understood in the context in which it occurs.

Prevention of cold-weather injuries involves risk management planning to assess potential cold-weather risks to health and performance and to implement the necessary controls. Factors requiring consideration include individual levels of risk, nutrition, hydration, clothing, physical activity, monitoring, and cold-mitigation strategies. Some evidence suggests that practicing cold-water immersion may reduce anxiety, pain, and delay the onset of shivering (Cheung 2015). For these reasons, cold acclimation has been proposed as a training tool to improve human performance, reduce cold-weather injuries, and improve cold tolerance (Gordon et al. 2019; Jones et al. 2017). Whether cold acclimation can be effectively implemented and maintained in military personnel requires further investigation. Other prevention measures aim to mitigate body cooling. Strategies center on the behavioral responses listed above, as well as keeping clothing dry. Skin-heating devices increase peripheral blood flow and slow the decline in skin temperature (Castellani et al. 2018) but have not been widely implemented in the field.

Military leaders and medical personnel should monitor troops for signs of cold injury because they tend to be underreported (Sullivan-Kwantes et al. 2017). Proper reporting is crucial to ensuring appropriate treatment so that soldiers can recover and minimize the risk of future cold injury. Prevention of freezing cold injuries for military personnel is important for maintaining current and future cold operations because, depending on the degree of injury, the soldier may have to be removed from the field, an operation, or the military. Once a person sustains a freezing cold injury, they can experience continued hypersensitivity to the cold and be at an elevated risk for another such injury, which can affect their performance on future cold operations (Gorjanc et al. 2019).

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## Heat Stress

That heat exposure can be debilitating or lethal, and thereby impact battlefield success, has been recognized by military commanders for millennia (Jarcho 1967; Olsen 1997; Goldman 2001). The scientific study of heat effects on military personnel began during British and European colonialism, as heat became a major source of illness among

troops stationed in tropical and desert climates (Bricknell 1995). Since then, military forces have devoted considerable effort toward understanding and expanding soldiers' tolerance to heat stress, with the goal of maximizing effectiveness and minimizing heat casualty risk (Ashworth et al. 2020; Nye and O'Connor 2020).

Detrimental effects of heat exposure are largely mediated by excessive elevations in body temperature. Normally, humans maintain a relatively stable body temperature by balancing body heat production from metabolism with an equivalent amount of heat loss. Heat stress tips this balance such that heat production exceeds heat loss, causing body temperature to rise. This occurs with physical exertion and/or if heat loss is limited by environmental factors (high air temperature, thermal radiation, humidity) and clothing.

Military working conditions often create heat stress. High temperatures and humidity levels can be expected during training exercises or deployments conducted in tropical or dry climate systems, or during summer months in temperate and continental climates. Rapid deployment to such conditions can be particularly problematic without the benefit of prior heat acclimatization. Similarly, divers performing tasks in desert climates may encounter very warm shallow-water temperatures. Vehicles, vessels, and aircraft can also be a major source of environmental heat stress (Kozlowski 2009). High temperatures in armored vehicles and seacraft can produce extremely high humidity levels as evaporated sweat from personnel causes moisture to accumulate inside crew compartments (Schlader et al. 2015; Jacobs et al. 2007). Thermal radiation from avionics, proximity to jet engines, and sun exposure through aircraft canopies can greatly elevate cockpit temperatures (Kenefick et al. 2008). Training and operational tasks can be physically demanding. Rapid movement speed, sometimes under heavy load, may be required during marches, patrols, and reconnaissance, especially during high-tempo operations. Personal protective clothing and equipment, such as body armor, flight ensembles (G-suits, immersion protection), and chemical, biological, radiological, nuclear, and explosive (CBRNE) defense, can be heavy, cumbersome, and impede body heat loss.

The human response to heat stress involves directing more blood flow to the skin and increasing sweat production, which together promote heat loss. Although these responses can effectively control body temperature, large and sustained elevations in skin blood flow and sweat rate can induce considerable strain on the body. Redistribution of blood to the skin, coupled with sweat-induced dehydration, limits the amount of blood returning to the heart, threatening its ability to maintain blood flow to the brain and other vital organs. For this reason, the ability to manage other stressors that threaten blood flow to the brain, such as prolonged standing (e.g., sentry duty), acceleration (e.g., tactical aviation), and hemorrhage, is seriously impaired by the addition of heat stress (Nunneley and Stribley 1979; Crandall et al. 2019). With combined exercise and environmental heat stress, the body's capacity for heat loss may be overwhelmed, causing body temperature to rise persistently until a serious heat illness occurs. The most common is heat exhaustion, characterized by an inability to continue physical activity due to extreme cardiovascular strain and dehydration. The most severe heat illness, heatstroke, is defined by extremely high body temperatures and impaired mental status. Heatstroke requires immediate and aggressive cooling to avoid organ/tissue damage and death. Serious

heat illness has an immediate impact on operational effectiveness and the consumption of medical resources. Recovery (often several weeks) following heatstroke contributes to lost duty time that may impact unit readiness. Additionally, prior heat illness can increase the likelihood of a future episode of heat illness, which must be considered before future operations.

Body heat strain can degrade mental, psychomotor, and physical task performance. Mental tasks requiring vigilance are the most susceptible to heat, especially those perceived to be boring. This is particularly problematic due to the importance of vigilance in military operations (e.g., patrol, sentry duty, vehicle operations). Prolonged heat stress impairs complex mental tasks requiring memory, interpreting information, and reasoning. In contrast, simple reaction time tasks, such as target detection, are largely unaffected by heat. Prolonged heat exposure also degrades manual coordination and steadiness, which can affect marksmanship. Heat-related deteriorations in steadiness and attention affect tracking ability, which is required for piloting, target acquisition, and weapons alignment. Additionally, with sustained physical work (e.g., march, patrol) in conditions that restrict sweat evaporation (e.g., high humidity, little airflow, and/or protective clothing), rapid elevations in body temperature and cardiovascular strain limit work time. The relationship between work intensity and maximum work time during heat exposure while wearing CBRNE protection is demonstrated in Fig. 1 (McLellan et al. 2013).

Within a unit, the risk of heat-related illness and degradations in performance may not be equal between soldiers. This is because the physiological responses to a given level of heat stress are highly variable between individuals. Numerous factors contribute to this variability; the most common are summarized in Table 2. Commanders and medical officers must be aware of these risk factors to properly manage heat casualty risk.

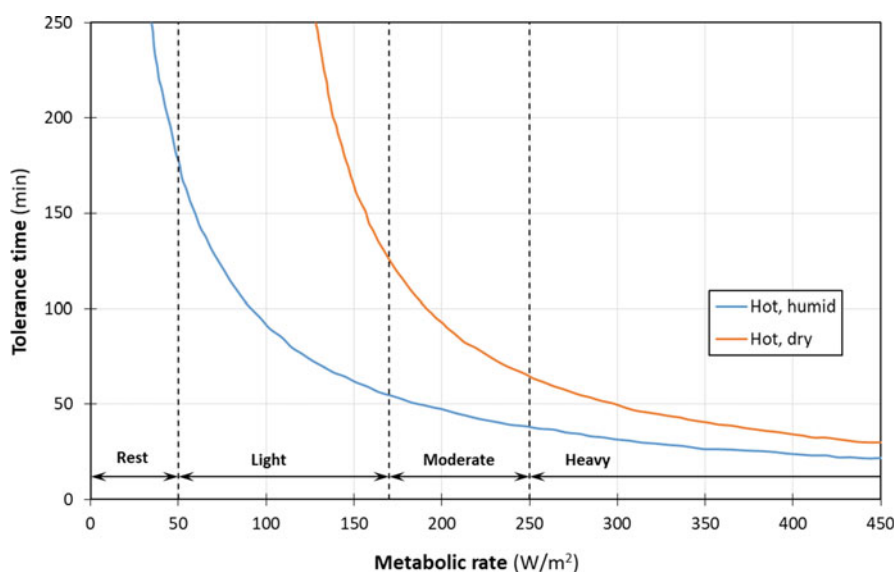
Heat stress management is critical for preventing heat casualties. Most importantly, leadership must fully inform personnel of the risk associated with heat stress. Heat acclimatization and adequate water intake are key for optimizing effectiveness. Adherence to prescribed work/rest cycles based on environment, work intensity, and clothing can effectively limit the cumulative amount of heat stress and prevent dangerous heat strain. Similarly, mission planning algorithms use physical activity factors (speed, load, slope, terrain), individual traits (body size, acclimatization, hydration), environmental parameters, and clothing properties to predict physiological strain, and prescribe work/rest balance and water needs. Direct cooling can also assist in heat management (McLellan et al. 2013). Examples include liquid or air circulation underneath protective clothing, ice vests, or water immersion; though the method used must account for the soldier's requirements for mobility, strain of added mass, power requirements, and integration with protective ensembles.

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## **Hypobaric Stress: Hypoxic Hypoxia**

Military aviators flying at high altitude and soldiers traversing mountainous terrain are exposed to low atmospheric pressures. The ensuing stress generates a variety of physical, physiological, and psychological responses on humans, who are not





**Fig. 1** Relationship between work tolerance time and metabolic rate while wearing the Canadian Forces nuclear, biological, and chemical protective clothing ensemble in hot-dry and hot-humid environmental conditions. Dotted vertical lines demarcate metabolic rates consistent with the indicated work intensities. Reproduced with permission from the Canadian Department of National Defence. The source is Defence R&D Canada

adapted to function in such a hostile environment. The effects could be profound on performance and may cause serious risks that could result in injuries or fatalities, impacting mission success. Historically, the effects of altitude began to be understood in the sixteenth century (Houston 1987; DeHart 1996). In aviation, the first detailed description of the effects of altitude can be traced back to the early balloon flights in the eighteenth century (West 1998). The first comprehensive scientific studies began in the late 1870s (Hitchcock 1971). They were the first experiments to demonstrate that specific ill effects and symptoms were the result of oxygen deficiency, that is, hypoxia, in the body and the decrease of the oxygen partial pressure ( $PO_2$ ) at altitude (Bert 1878; Marotte 2006).

The inherent risk of hypoxic hypoxia during flight has been recognized for some time. It was a serious hazard in both World Wars and remains a potential danger in the present, with recent events of in-flight hypoxia-induced symptoms in modern military aircraft, which can fly longer at increased operational altitudes. For example, the number of hypoxia episodes within the US Navy F/A-18 community increased tenfold between 2010 and 2017 (Rice et al. 2019). Because in-flight hypoxia incidents can result in total loss of precious life and costly aircraft, understanding the impairments and recognizing the symptoms is of paramount importance for aircrew operating at altitude. In practice, hypoxia arises from (i) breathing air at high altitude in an unpressurized aircraft, (ii) a loss of cabin pressure in a pressurized aircraft, (iii) failure or absence of an on-board life support systems, or (iv) incorrect use of the oxygen equipment.



**Table 2** Risk factors for exertional heat illness (EHI) among military personnel

Risk factor	Consequences
<i>Individual factors</i>	
Low aerobic capacity	Aerobic fitness improves evaporative capacity and lowers cardiovascular strain
Lack of heat acclimatization	Heat acclimatization maximizes evaporative capacity and lowers cardiovascular strain
Motivation	Desire or pressure to complete training can push individuals beyond tolerance limits
Dehydration	Can attenuate sweat rate, exacerbates cardiovascular strain
<i>Illness or injury</i>	
Febrile illness	Accentuates hyperthermia
Recent viral infection	Accentuates hyperthermia, compromises immune response
Skin grafts	Extensive grafts lower evaporative capacity in burn survivors
<i>Medications &amp; Supplements</i>	
Amphetamines	Delay fatigue and prolong exertion; increase heat production, heart rate, blood pressure
Anticholinergics (e.g., atropine)	Impaired sweating and skin blood flow
Antihistamines	Impaired sweating
Beta-blockers (e.g., propranolol)	Attenuated blood pressure, skin blood flow
Diuretics	Fluid and electrolyte depletion
NSAID	Gut and liver toxicity
Ephedrine	Greater heat production, heart rate, blood pressure
<i>Genetics</i>	
Sickle-cell trait	Higher EHI incidence; mechanism unclear
RYR-1 mutation	Greater heat production (malignant hyperthermia)
TLR4 polymorphisms	Diminished endotoxin response

NSAID, nonsteroidal anti-inflammatory drugs; RYR1, ryanodine receptor 1 gene; TLR4, toll-like receptor 4 gene

Hypoxia manifests as an inadequate supply of oxygen by arterial blood to tissues, resulting in rapid impairment of bodily function, especially in the central nervous system (Haldane et al. 1919). Although the oxygen concentration in the air is the same at sea-level and high altitude, the reduction in barometric pressure as humans ascend to high altitude means a lower  $PO_2$ . Thus, the gradient for oxygen diffusion in the body is lower than at sea level, reducing the capacity of gas exchange between the atmosphere and the cells. Altitude-related hypoxic stress produces a combination of physiological and psychological effects on individuals, accompanied by a remarkable variety of signs and symptoms that can have serious consequences, leading to unconsciousness. Given the oxygen deficiency at altitude, effects include increased depth of breathing while the cardiovascular system tries to compensate by increasing blood flow to the tissues. Depending on the hypoxia level, heart rate increases, and cardiac output is redistributed to maintain oxygen delivery to the most critical tissues

(i.e., brain and heart). Signs and symptoms can be grouped into five objective and subjective types: (i) general (headaches, tingling, numbness, breathing difficulty, feelings of warmth or cold); (ii) cognitive (memory, lapses, judgment, confusion), (iii) psychomotor (reaction time, communication, muscular, eye-hand coordination); (iv) behavioral (personality, mood); (v) visual (acuity, peripheral, night, color) (Haldane et al. 1919; Carson et al. 1969; Smith 2008). The degree and severity depends on altitude exposure level and duration with or without physical exertion. These symptoms can be unique to every person and, when they occur, constant throughout their life when exposed to hypoxic conditions. Given the insidious nature of hypoxia and the individual susceptibility of its symptoms, detection and corrective action can be difficult during flight.

Because of their high oxygen requirement, the central nervous system and the retina are highly sensitive and most vulnerable to hypoxia. Therefore, the first effect of hypoxia on performance is a decrement of visual and cerebral performance (Cudaback 1984). Visual degradation is generally consistent and starts occurring at around 1500 m (5000 ft). Over the years, the effect of hypoxia on cognitive performance and mental functioning has been investigated extensively (Cudaback 1984; Greene 1957; Petrassi et al. 2012). Motor and cognitive performance impairments vary from person to person and depend on the altitude level and rate of ascent. In addition to the decrements described above, hypoxia can also impair higher mental processes, complex decision making, and working memory such as the executive functions. The emergence of modern aircraft with a cognitively tasking cockpit highlights the importance of working memory due to the number of flying tasks performed simultaneously (Malle et al. 2013). Between 1525 m (5000 ft) and 4575 m (15,000 ft), performance decrements at varying hypoxia levels are less understood and difficult to quantify, possibly due to individual difference and absence of sensitivity or specificity of the multitude cognitive tests used. A comprehensive literature review demonstrated that the effects of hypoxic hypoxia on cognitive function at these altitudes extend to both elementary and higher-order cognitive functions, and decrements in cognitive tasks with great complexity are more likely for a given level of mild hypoxia (Petrassi et al. 2012).

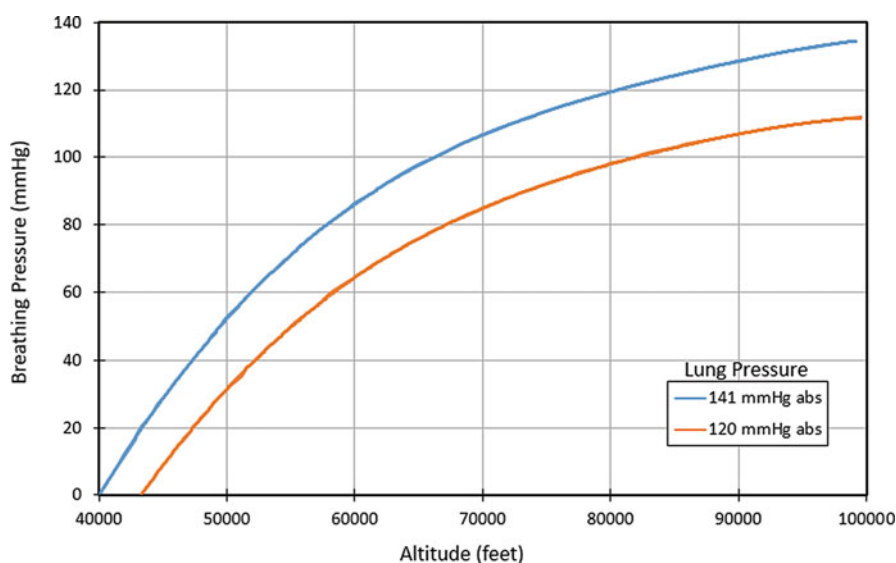
Breathing air above 4575 m (15,000 ft) makes the aircrew unaware of any performance decrement or presence of symptoms, due to a significant loss of critical judgment and determination. Emotional state is affected, and the individual may become disinhibited and sometimes physically violent (Harding and Gradwell 1999). Above 6100 m (20,000 ft), cognitive performance and physical capacity drop rapidly, followed by convulsions, unconsciousness, and death without notice. The time of useful consciousness (also called time of effective performance) is the effective period from the interruption of the oxygen supply, or the start of low oxygen exposure environment, to the time when useful function is lost, and an individual is no longer capable of performing corrective and protective flying actions (Carlyle 1963). In practice, time of useful consciousness permits the aircrew to initiate corrective actions, such as descend to safer altitudes or initiate supplemental oxygen breathing. Altitude level, oxygen concentration, high ascent rate (or rapid decompression), physical exertion, and individual differences have been shown to greatly affect time of useful consciousness (Greene 1957).

The adverse effects of hypoxia must be prevented during flight. It is commonly accepted that aircrew and passengers must breathe supplemental oxygen as a countermeasure for hypoxia using a breathing mask for cabin altitudes above 3048 m (10,000 ft). Signs and symptoms of hypoxia are consistent for the same individual whenever hypoxia is felt; however, they are perceived differently by different individuals. It is important that military aircrew become familiar with the effects of hypoxia on their own bodies to be able to take corrective actions. These can include a descent to safe altitudes in unpressurized cabins and use of supplemental oxygen. The familiarization with the signs and symptoms of hypoxia, also called indoctrination at high altitudes, is usually conducted in a controlled environment, either by reducing the barometric pressure in a hypobaric chamber or by breathing a reduced oxygen fraction breathing mixture at sea level to simulate altitude (known as normobaric altitude). The other benefit of indoctrination is to familiarize the aviator with the proper use of oxygen systems. Aviators with hypoxia familiarization have been found to respond better to in-flight hypoxic incidents.

As development of more capable tactical aircraft emerged in the early 1950s, it was realized that further emergency hypoxia life support systems would be needed to prevent severe hypoxia in the event of cabin decompressions above 7625 m (25,000 ft). As capabilities increased, tactical aircraft were able to reach in excess of 18,300 m (60,000 ft). As tactical military aircraft incorporated jet propulsion and cabin pressurization, aircrew could maneuver and cruise at higher altitudes. This enabled surveillance at altitudes beyond weapon range, delivery of weapon systems at higher ceilings, and improved fuel efficiency and range due to the thinner atmosphere (and thus reduce drag). Next generation aircraft will be able to maintain cruise altitude up to 25,925 m (85,000 ft).

The ideal oxygen pressure in the lung's alveoli is around 100–103 mmHg at sea level (where total barometric pressure is 760 mmHg). At a cabin decompression exposure altitude of 12,200 m (40,000 ft), the total barometric pressure is only 141 mmHg, this alveolar pressure will fall well below 40 mmHg, causing severe hypoxia (Ernsting 1966; Green 2016; Holness et al. 1980). To address this, researchers in the USA and the UK developed emergency breathing systems in the 1960s. For cabin altitudes of greater than 12,200 m (40,000 ft), 100% oxygen breathing gas is immediately delivered to the lungs for a minimum total pulmonary pressure of 141 mmHg (Ackles et al. 1978; Balldin 1978). As the exposure altitude increases past 12,200 m (40,000 ft), the pressure of oxygen delivered to the respiratory tract is increased, to maintain as close as possible to the 141 mmHg level (Fig. 2). This increased pressure delivered to the lungs during emergency exposure to hypoxia above 12,200 m (40,000 ft) altitude is termed positive pressure breathing (PPB) (Ernsting 1966; Green 2016).

Modern military tactical aircraft continue to employ emergency PPB as an emergency hypoxia measure vs. adopting full pressure suits as emergency hypoxia equipment since (a) partial pressure ensembles allow egress and emergency ejection from the aircraft; (b) full pressure suits are environmentally hot, restrictive, and do not allow the aircrew to flex and rotate the head and trunk, which is critical to keeping situational awareness and vision in the dynamic tactical cockpit; (c) PPB



**Fig. 2** As emergency cabin decompression altitude exposure increases past 12,200 m (40,000 ft), the levels of 100% O<sub>2</sub> pressure delivered the lungs must increase in order to maintain a minimum of 140 mmHg, ensuring at least a nominal level of alveolar oxygen pressure. This type of emergency O<sub>2</sub> pressure delivery is termed “positive pressure breathing” or PPB. Redrawn from (Ernsting 1966). Reproduced with permission from the Canadian Department of National Defence. The source is Defence R&D Canada

ensembles allow a modular approach and pneumatic counterpressure of the legs and thorax (via the use of the anti G suit and chest counterpressure vest – discussed in more detail below) (Ackles et al. 1978; Ernsting et al. 1960) (Fig. 3).

PPB though effective in maintaining a minimum cerebral oxygenation up to very high cabin altitudes during decompression (termed “get-me-down” protection), PPB at levels above 50 mmHg places significant strain upon the respiratory and cardiovascular systems (Ackles et al. 1978; Balldin 1978). When high-pressure gas enters the respiratory system, it must be counterbalanced across the chest wall, otherwise the alveoli may rupture, which may cause a serious air embolism. To prevent this, the gas entering the respiratory system from the emergency-breathing regulator during decompression also fills a pneumatic counterpressure vest, mitigating most of the lung distension (Ernsting 1966).

At the same time, cardiovascular function impairment also occurs when a pilot is exposed to high levels of PPB for even several seconds. As intrapulmonary pressure rises rapidly, venous return of blood back to the heart is interrupted. If PPB continues, and cardiovascular dysfunction is not addressed symptoms of syncope (including dizziness, confusion, cognitive decrements and alterations in vision) – followed by loss of consciousness may ensue. Thus, paradoxically, although severe hypoxia may be corrected, there is a risk of aircrew loss of consciousness due to secondary complications of PPB (Ernsting 1966; Green 2016; Holness et al. 1980; Ackles et al. 1978; Balldin 1978).



**Fig. 3** Representative Positive Pressure Breathing Ensemble. Picture shows the helmet/oronasal mask, thoracic jerkin, anti-G suit, and connectors/tubing. The breathing system is tied into the aircraft's life support breathing supply and regulator (blend of bottled O<sub>2</sub> and engine bleed air). Reproduced with permission from the Canadian Department of National Defence. The source is Defence R&D Canada

To address these cardiovascular effects of PPB, the anti-G suit – also utilized for acceleration protection – effectively counter these effects, and restore venous return to the heart during PPB. Studies determined that the optimal protection was afforded by inflating the Anti-G suit to multiples of the breathing pressure (i.e., for 60 mmHg oxygen delivered to the lungs, 60 mmHg pressure inflates the torso jerkin and upwards of 4 x the breathing pressure for the G-suit – 240 mmHg) (Ackles et al. 1978; Balldin 1978; Ernsting et al. 1960). Also, the increased coverage of the G-suit was directly correlated with further reductions in cardiovascular symptoms of PPB (Goodman et al. 1993).

Hypoxia may have significant impacts upon behavioral changes, especially in the very short term, as reduced cerebral oxygen levels manifest as confusion, memory deficits, and even mood alterations. These become significant when operational decision making and communication is impacted during a sudden life support

system failure, and when emergency procedures need to be enacted immediately. On the other hand, there is very little evidence that exposure to an acute bout of severe hypoxia during a cabin decompression leads to significant long-term behavioral or cognitive effects or any permanent structural changes to the central nervous system.

Aircrew training for high altitude emergency hypoxia typically involves a combination of in-class instruction (theory and physiology of high-altitude hypoxia and countermeasures, severe hypoxia recognition), followed by direct exposure/simulation of high levels of PPB at ground-level. This is accomplished by using custom air delivery systems which deliver high pressure air to the lungs, and the full PPB ensemble. Occasionally, PPB training is also combined with simulated emergency scenarios, which provide additional cognitive challenges to encourage further habituation and training opportunities for aircrew. This enables indoctrination of the sensations of high levels of PPB and allows habituation in a safe environment.

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## Vibration in Military Transport

Vibration is defined as a series of impulses transmitted to the body. These may be directed to the body through direct contact with a vibrating object/structure or transmitted through the air as sound waves. In essence, vibrations at many common frequencies are perceived as sound by the human auditory system, whereas at low frequencies, impulses arriving at the body are felt physically. At one end of the vibration spectrum are explosion/blast and firearms discharges that produce high magnitude vibration effects, which are the most destructive to the human (organs, skeletal, muscular, soft tissue, and brain), or on the other spectrum ultra-high frequency vibrations/acoustics, which may have large negative effects on hearing perception and communication. However, for the purposes of this section, we summarize the effects of lower-range (60–100 Hz) non-weapon and non-acoustic related vibrations upon the soldier (Coerman 1940).

Vibration is commonly experienced in many military operating environments, and these range from undersea (e.g., vibrations emanating from self-contained breathing apparatus) and inside over-land vehicles (buffet, rough terrain, and drive-train effects), but most commonly in the aerospace environment. Helicopter rotor rotations and air turbulence vibration during high speed/high acceleration flight in tactical aircraft account for most of the vibration effects encountered (Griffin 1990; Guignard and King 1972).

Helicopter-induced vibration causes the greatest impact upon aircrew performance (auditory, visual disturbances) and health. In particular, the effect of these low-frequency rotor-caused vibrations manifests in neck and back soft-tissue and skeletal pathology and pain. When combined with unnatural postures, which are used in many operations, and the wearing of heavy helmet/head-up night vision equipment, the incidence of debilitating neck pain is significant. Although only one contributor to helicopter neck pain, active Aviation Medicine research continues, with the aim of developing methods to mitigate vibration for helicopter aircrew.

Although a performance and health issue, high or low frequency vibration may also be utilized in many military environments to enhance performance. Haptic

cueing is incorporated into several aviation and naval vehicular environments for orientation cueing, as well as for aircraft collision avoidance and stall warning systems. Haptic systems are gradually being introduced in land environments for group/individual position location and incoming fire warnings (Coerman 1940; Griffin 1990; Guignard and King 1972).

There is no evidence that exposure to vibration leads to significant and permanent behavioral changes or cognitive impairments. However, vibration in the cockpit may negatively impact aircrew performance by interfering with communication, cause a distraction serious enough to cause pain, nausea, and visual decrements, ultimately leading to poor decision-making during routine and emergency operations. This would be exacerbated during long-duration missions.

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## Acceleration and the Tactical Air Environment

Acceleration stress continues to be a significant operational hazard for aircrew. Initially recognized as more capable aircraft were developed around World War I, increased thrust and airframe structural strength allowed for aggressive aerial maneuvers, which became operational standards during air-to-air combat and for deployment of munitions (Burton 1988; Lyons et al. 1991). With the introduction of jet propulsion after World War II, these capabilities increased significantly, allowing 8–10 times gravitational forces (commonly termed “G” – which on earth is the force due to gravity acting on the body and is equal to +1 G). However, accompanying these increased flight capabilities were numerous loss of consciousness incidents and fatalities among air force personnel across many adversaries’ and allies’ nations (Ernsting 1966; Burton 1986; Lyons et al. 1991).

Acceleration stress that threatens aircrew health follows the vertical (“z” or spinal) axis of the body, referred to as “headward acceleration” +Gz. Other vectors of G acceleration are found in the “x” and “y” directions, especially in other flight or transport environments, but they are usually not associated with significant cardiovascular threats in the tactical aviation environment (Ernsting 1966; Burton 1986; Leverett and Whinnery 1985).

+Gz causes a perceived “heaviness” of limbs above +5Gz, with an inability to use or raise the limbs above +8Gz. Additionally, acceleration acts on the soft tissue and muscles that insert on the spine, and exacerbates the stress imposed by heavy helmet, mask, and sighting equipment. Fatigue of the voluntary respiratory muscles responsible for chest expansion during inspiration is also a feature of high +Gz levels. One unusual effect of high +Gz exposure is the development of petechial hemorrhages in the skin – pinpoint type rashes, caused by high hydrostatic tissue pressure. These are usually painless, harmless, and self-limiting to the first few high +Gz occurrences (Ernsting 1966; Burton 1986).

Blood flow in the upper half of the lungs ceases above +3Gz, which causes imbalances of oxygen ventilation vs. blood perfusion of the lung. Therefore, there will be a larger volume of perfused lung not receiving oxygen. This results in desaturation of systemic arterial blood such that at +5Gz, arterial saturation is 85% (normal is 98%) (Green 2016).



As +Gz acceleration is experienced in the cockpit, several physical/physiological events occur in the immediate seconds of +Gz stress, the weight of the blood above the heart increases directly as a function of each increment of +Gz; that is, if the aircraft pulls a +3Gz turn, the weight of blood in major arteries above the heart increases threefold (Leverett and Whinnery 1985; Burton 1988).

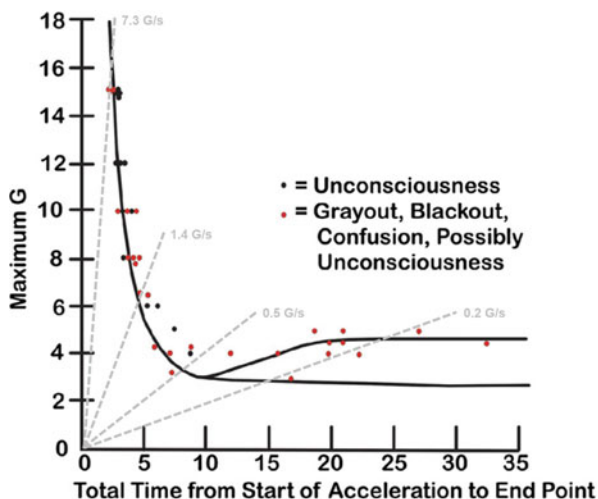
If the +Gz forces persist for less than 5–7 s, the cardiorespiratory implications to the aircrew are minimal. This is explained by the latent stores of high energy molecules in the brain that enable continued cognition and central nervous system (brain, vision) function for this short time frame. However, if acceleration is sustained longer than 5–7 s and is above +4–5Gz, oxygen delivery to the central nervous system may be completely interrupted due to low cerebral arterial blood pressure (Green 2016; Burton 1986; Banks et al. 2008; Wood and Lambert 1946).

There are underlying autonomic physiological reflexes that function to restore blood pressure in the face of orthostatic challenges. The most common example is standing too quickly from a supine position, leading to fading vision or fainting (loss of consciousness (LOC)). In the high +Gz environment, these sympathetic nervous system reflexes are too slow (requiring 7–12 s) and ineffective in the face of high sustained rapid-onset +Gz. Figure 4 illustrates the intersection between natural cardiovascular reflexes and G-onset and symptoms through the “G-Time Tolerance Curve” (Green 2016; Burton 1986; Banks et al. 2008).

The first major effect of increasing +Gz is an alteration in vision. As head-level arterial pressure decreases with increasing +Gz, blood pressure to the retina falls, and the aircrew will first experience color acuity loss, followed by loss of peripheral vision, and then complete loss of vision. In rapid-onset +Gz, loss of vision may occur simultaneously with LOC. Aircrew are trained (in flight or in centrifuges) to recognize the signs of loss of vision effects, and initiate countermeasures (discussed below), before complete loss of vision or LOC occurs (Green 2016; Burton 1986; Scott et al. 2007; Burns 1988). Aircrew undergoing +Gz stress may experience changes in behavior, especially after a near-LOC or complete GLOC incident. These may manifest immediately as consciousness returns, and characterized by lethargy, confusion, and apathy (Ernsting 1966; Burton 1986). There is concern that performing complex tasks after GLOC (e.g., conducting an instrument landing in poor weather conditions) may be degraded. Fortunately, there is no evidence that repeated +Gz insults contribute to permanent changes in behavior or cognition. Certainly, aircrew who experience GLOC may require psychological counseling, as the total loss of control of the aircraft and specter of a possible fatal event may cause anxiety and a range of psychological issues.

The four main factors that govern +Gz tolerance are the magnitude of +Gz, the rate of onset, the duration of exposure, and the immediate pre-Gz conditions. However, factors such as aircrew morphology (height is known as a risk factor – tall individuals being at greater risk), preexisting cardiovascular conditions, medications, diet, sleep, stress, and training are key determinants. Some elements of resilience to +Gz stress are adaptable and display characteristic adaptive responses with habitual +Gz exposure, as well as decay in +Gz tolerance during prolonged layoff from operational flying or centrifuge exposure/training. Additional factors



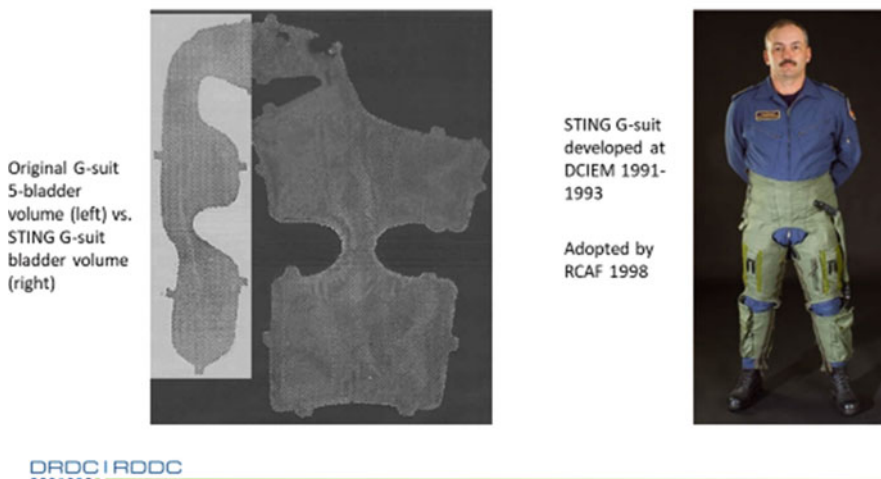


**Fig. 4** Maximum +Gz tolerance versus time from the start of an acceleration in relaxed subjects (i.e., without using a G-protection device or manoeuvre) to an endpoint (indicated by the different symbols). Each thin grey line represents acceleration at different onset rates (G per second, G/s). With a slower +Gz onset rate (e.g., 0.2 G/s), visual symptoms will occur after 25 s at +4Gz and G-LOC will intervene after 32 s at +5Gz. With a gradual onset of 0.5 G/s, visual symptoms are likely after about 8 s and LOC about 1 s later at +4Gz. Rapid onset of sustained +Gz ( $\geq 1.4$  G/s) will result in G-LOC after about 4 s without any visual warning symptoms. However, if rapid-onset +Gz is sustained for only 1–5 s, there may be no visual disturbances or G-LOC since brain substrate reserves will maintain consciousness. Below the solid black line, the arterial baroreflex effectively counteracts the effect on +Gz, maintaining blood flow to the brain. The exception is if a push-pull maneuver precedes +Gz (as discussed in the text). © Whinnery and Forster. Modified from (Whinnery and Forster 2013) under the terms of the Creative Common Attribution License (<http://creativecommons.org/licenses/by/2.0>)

influencing +Gz tolerance are the biodynamics of the flying environment, thermal strain, motion sickness, and vestibular organ stimulation reduces tolerance. Excessive endurance exercise training is also implicated in impaired +Gz tolerance (Burton 1986).

The simplest countermeasure used in military tactical aviation to mitigate +Gz exposure has been the reclining of the seat back angle, which diminishes the hydrostatic column height between the heart and the brain (Burns et al. 1975). The most common and effective countermeasure employed by aircrew is the Anti-G Straining Maneuver (AGSM), which effectively raises the +Gz tolerance threshold from +3.5 or +4Gz, up to +8.5–11Gz, depending upon the skill and strength of the aircrew (Wood and Code 1947). The maneuver is a coordinated and cyclic isometric muscle contraction combined with a closed glottis breath hold (Ernsting 1966; Burton 1986; Buick et al. 1992). A well-performed AGSM instantly raises blood pressure and thus retinal and brain perfusion. Though highly effective, it is very fatiguing, especially if used repeatedly during long sorties, and requires extensive aircrew training (usually in human centrifuge facilities).

## Advanced Anti-G suits: expanded air bladders



**Fig. 5** Evolution of the anti-G Suit. Greater bladder volume and lower extremity/abdominal coverage afforded improved protection in combination with the anti-g straining maneuver. Reproduced with permission from the Canadian Department of National Defence. The source is Defence R&D Canada

Used in tandem with the AGSM is the Anti-G Suit. Invented and developed initially by Canadian and American physiologists during the early World War II period, the first garments used water-filled designs, which exploited the counterpressure created by the increasing pressure of water on the limbs and abdomen during increased +Gz. They were replaced by pneumatic bladders fitted to the inside of the anti-G trousers and a regulator to provide the high-pressure air supply. The basic design (which has remained to this day) is a five-bladder suit: one abdominal, two thigh, and two calf interconnected bladders. The Anti-G suit has undergone several evolutions, and the modern design (e.g., Canada's **STING Sustained Tolerance for INcreasing G**) anti-G ensemble has larger circumferential bladders, with improved regulators and inflation schedules to optimize +Gz protection (Fig. 5).

Aeromedical scientists recognized during the 1970s and 1980s that PPB (discussed earlier in this chapter) could be exploited for +Gz protection by partially replacing the respiratory component of the AGSM and passively providing high intrathoracic pressure to the lungs, which is then imparted to the cardiovascular system (Glaister and Lisher 1976). The use of PPB for +Gz (termed PBG) has the advantage of minimizing AGSM fatigue and allows increased +Gz exposure tolerance and endurance. Human centrifuge studies demonstrated greater sortie time and +Gz endurance, reduced fatigue, and reduced chance of GLOC. However, PBG has some limitations: additional aircrew training is required, a thoracic counterpressure vest must be used, the helmet and oronasal mask system is difficult to seal during high +Gz levels, and a separate regulator is required, complicating the

life support engineering requirements in the aircraft (Burton 1986; Banks et al. 2008; Scott et al. 2007; Buick et al. 1992; Burns 1988).

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## Conclusion

The military operates in extreme environments. Working under varying levels of environmental stress can affect human performance by negatively impacting physical health, psychological health, cognitive functioning, and affecting human behavior. Research on the impact of these environmental stressors on humans, and military members in particular, continues today as in many of these areas of science the understanding of the impact on health and human behavior, including additive stress, continues to evolve.

Research on human performance under these environmental stressors show that in the military context, there are various methods to mitigate some of the impacts. These methods include specialized training, acclimatization, effective monitoring, addition of protective equipment, and behavioral modifications to help reduce the impact of environmental stress on health and human performance. Education and awareness training, such as stress inoculation exposure (Kavanagh 2005), may help soldiers recognize signs of excessive strain and initiate behavioral changes in a manner that helps mitigate against these threats. This type of training can also be beneficial for group performance under stress (Kavanagh 2005). Research about soldiers operating in the heat, for example, has found that physiological monitoring (e.g., heart rate monitoring) can be used in training to help soldiers identify when they are at risk for an injury and encourage behavior changes to reduce the chance of injury and maintain high levels human performance. As biomedical and wearable technologies continue to improve (both sensors and batteries), the adoption of unobtrusive and reliable personal bio-sensors and associated mobile software/algorithms will become feasible for operational use. These systems will be used either as training tools to educate individual performance or to monitor personnel under stress for medical professionals or commanding officers.

As advances in equipment and technology allow humans to push more physical boundaries (e.g., fly faster and climb higher) the military will be exploiting these advances to increase warfighters' advantages over adversaries in environments with extreme stressors. However, having the equipment is only one component of a broader concept of readiness that leadership needs to keep in mind when preparing for operations. Understanding the impact that these environments will have on performance, even with the best equipment, requires a clear realization of how appropriate training and effective leadership contributes to a system of enablers for effectiveness in operating environments that will continue to become increasingly extreme.

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## Summary

This chapter highlights the effects of several operational environments on military personnel during training and operations. Exposure to extremes of noise, temperature, humidity, pressure, vibration, and acceleration can have detrimental effects on physical and cognitive performance and exacerbate psychological stress. These environmental stressors can occur in isolation, such as exposure to extreme cold weather in the Arctic, or they can be additive, such as experiencing noise, vibration, and acceleration in aircraft. Environmental stress can also affect human behavior, and it is important to understand how adaptations or behavior changes can impact military operations and mission effectiveness. Education and training, appropriate use of protective clothing, leadership, technology, and experience all play a role in learning how to mitigate the risk of environmental injuries and degraded performance in these extreme environments. Research on human performance under these environmental stressors in the military context explores ways to mitigate the harmful effects of environmental stress and augment warfighters' ability to operate in extreme environments.

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## Cross-References

- ▶ [Air Operations](#)
- ▶ [Land Operations](#)
- ▶ [Maybe These or Nothing](#)
- ▶ [What is Military Operations?](#)
- ▶ [What is Military Sciences?](#)

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# Military Design in European Defense Forces: An Evolving Niche

Therese Heltberg, Andreas Hagedorn Krogh, and Karena Kyne

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## Abstract

Faced with increasingly unpredictable, dynamic, and complex threats and adversaries, European defense forces experiment with design thinking as an alternative to more traditional military planning perspectives and methodologies. Reviewing the current state of military design in Europe, this chapter provides an overview of recent design developments in doctrines, European military organizations, and European defense colleges. It explains these developments and provides examples of recent design practices in a European military context. Currently, military design is still a niche in Europe, but the chapter shows how the design approach continues to evolve as military scholars, strategists, and planners explore and

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T. Heltberg (✉) · A. H. Krogh  
Royal Danish Defence College, Copenhagen, Denmark  
e-mail: [anhe@fak.dk](mailto:anhe@fak.dk); [ankr@fak.dk](mailto:ankr@fak.dk)

K. Kyne  
Archipelago of Design, AOD, Ottawa, Canada  
e-mail: [karenakyne@aodnetwork.ca](mailto:karenakyne@aodnetwork.ca)

develop new and innovative ways of deploying design methodologies in military practice.

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**Keywords**

Military design · Design teaching · Operations planning · Innovation · Military · Defense · Armed forces · Europe · NATO

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**Introduction**

The complexion of war and armed conflict that European militaries engage in has changed substantially in recent years. Increasingly, military organizations must deal with unpredictable, unsettled, and complex conditions and adversaries (NATO 2013a, 2021). New hybrid and multi-domain threats are becoming more severe, demanding increased attention to space, cyberspace, information systems, electronic warfare, artificial intelligence (AI), and autonomous weapons forces (NATO 2021, 2020, 2022; TRADOC 2017; USAFSG 2017; Coker 2015). Lone-wolves and non-state-actors – including hacker groups, cartels, human-trafficking organizations, and terror organizations – now have instrument of power parity in many respects, blurring the lines between state actors, civilians, and groups of combatants. At the same time, Russia's 2014 annexation of Crimea and 2022 invasion of Ukraine; increasing tensions between large nation-state adversaries in the Arctic; and fluxes of refugees from Africa and the Middle East influence European security perspectives in ways that were unimagined a few decades ago. North Atlantic Treaty Organization (NATO) and NATO leaders are increasingly facing volatile, uncertain, complex, and ambiguous (VUCA) operating environments, where each mission has unique challenges, and existing doctrine and standard operational procedures (SOP) are unable to account for all situations that military personnel and decision-makers might face (NATO 2022). Therefore, military leaders must be able to think creatively and tailor each mission and operation to navigate those scenarios (ibid.: 1–1, 5–2). Future military leaders need technological competence, creativity, critical thinking skills, and the ability to build relationships based on trust, respect, and confidence (ibid.: 1–2). Additionally, they must “be comfortable with ambiguity, complexity and rapid change and see challenges as opportunities to grow rather than fail” (ibid.: 4–9).

These new and dynamic threats not only inform needed leadership skills but also increase the need for and relevance of design as one possible approach to military organization, leadership, and command in European and international military contexts (e.g., Porkoláb and Zweibelson 2018; Beaulieu-Brossard and Dufort 2017; Pettit and Toczec 2017; Jackson 2013; Zweibelson 2017; Banach 2009). In increasingly complex conflict and operational environments, European military scholars, strategists, and planners have noted classical military planning models fall short, and traditional doctrines are insufficient (Sookermany 2013; Pikner and Spisák 2013; Schaefer 2009; Bousquet 2008; Heltberg and Dahl 2019). Design

thinking offers perspectives and methods that are generally considered well-suited for developing tailored and creative solutions to complex, multi-dimensional problems (Dorst 2011; Simon 1996; Schön 1983; Rowe 1987), and which address core needs in the current European military context.

This chapter provides an overview of the current state of military design in European defense forces. It describes the diversity of European military design uptakes and shows how military design is increasingly on the agenda in Europe, despite remaining relatively niche vis-à-vis institutionalized military planning doctrine and practice. Five subsections underpin and substantiate this conclusion. The first defines military design and explains how it differs from military planning. The second reviews the contemporary state of design among armed forces in Europe. The third presents three illustrative cases of design in European military organizations. The fourth considers possible future avenues of European military design research and practice. The fifth summarizes the main arguments and observations of the chapter in a brief conclusion.

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## Military Design and Planning

In recent years, military scholars have been increasingly occupied with understanding how design theory and practice entail new perceptions, approaches, and methodologies that are at odds with deeply rooted forms of sensemaking within military organizations (Wrigley et al. 2021; Pettit and Toczec 2017; Paparone et al. 2008; Beaulieu-Brossard and Dufort 2017). Understanding how the design approach differs from traditional military planning is key for grasping the current state of affairs in Europe to the extent that classical military operations planning and hierarchical organizational principles continue to form the backbone of defense forces in Europe. Outlining the distinction between military design and planning thus helps to better illuminate both the opportunities and obstacles for design as an emerging phenomenon in European military organizations.

Design thinking has evolved over the past decades as a conglomerate of methods and theories that aim to deal with complex problems (Nelson and Stolterman 2012; Simon 1996; Rowe 1987; Schön 1983; Rittel and Webber 1973). It combines insights and explorations across a range of disciplines, including complexity theory, critical theory, systems theory, creativity studies, and civilian design methodologies (Porkoláb and Zweibelson 2018; Beaulieu-Brossard and Dufort 2017; Rowe 1987). In 1969, economist and Nobel laureate Herbert Simon (1996: 111) suggested viewing design as a distinct science and way of thinking, focused on creating “the artificial” with respect to not only technological innovation but also social and political solutions to “ill-structured” problems of organizational development and social design. Simon (1996: 106) describes the design process as “problem-solving without a goal.” This kind of thinking does not preclude designers from designing for an end product (or end state) but maintains that the understanding of multiple propositions regarding desired end states and their actual design are part of the design process. Hence, design requires continuous openness toward the end state and

iterative development of the means to get there by all stakeholders and parties involved. This basic view of design aligns with the notion that contemporary militaries are engaged in ongoing geopolitical competition and evolving security challenges with multiple and conflicting interests at play. These require continuous problem-solving without setting an initial end state and where notions of “victory” and “defeat” have in some ways lost meaning (cf. Sinek 2019).

In the evolving literature on the subject, scholars have taken design to denote a process that includes a number of practical methods. One way to describe this process is developing a mindset that is seeking to be aware of how one views and constructs the world, and the implications this has for engagement in it (Nelson and Stolterman 2012; Dorst 2011; von Thienen et al. 2011; Boland and Collopy 2004). Designers need to engage in critical and constructive reflective questioning and master the ability to rework the framing of problems and problem contexts continuously. As such, design has even been described as a distinct culture of inquiry and action (Wrigley et al. 2021; Nelson and Stolterman 2012). Central design values include empathy, divergent thinking, challenging assumptions, involvement of stakeholders, stewarding divergence (i.e., bringing together differences and assuming holistic approaches), and navigating the unknown (e.g., Wrigley et al. 2021; Nelson and Stolterman 2012; Dorst 2011; von Thienen et al. 2011). Heltberg and Dahl (2019: 170) note how design also relates to specific perceptions or notions of “knowledge” – notions of “what knowledge is” and “what kind of knowledge is valuable.” In organizations that perceive and value knowledge as fixed and discrete, as “an asset that someone can have,” the design mindset and the use of design tools are often challenged. Based on a case study of the Course of Action brainstorming that takes place in the military operational planning process, Heltberg and Dahl (ibid.) show how this perception of knowledge hampers the suspension of conclusions; the ability and willingness to continuously reframe problem understandings; and efforts to work collaboratively in order to create new, holistic solutions.

Design methodologies are participatory and encompass phases such as exploration, ideation, modeling by use of visual or hands-on material, prototyping, and testing (Wrigley et al. 2021; Nelson and Stolterman 2012; von Thienen et al. 2011). In design thinking, the participants do not assume that the design task begins with a definable problem that stakeholders can simply describe, analyze, and then solve. Instead, the more they try to understand the problem and their needs and wants (the “desiderata”), the more the problem or challenge is reframed, or indeed, completely changed. There is thus a “coevolution” of the design problem and the design solution (Dorst 2006: 10). Different stakeholders engage with context-specific knowledge, perspectives, interests, and concerns whereby design processes feature a continuous exploration of problem-framing and solutions (Boland and Collopy 2004; Dorst 2006). Design methodologies stress the need for working collaboratively and inclusively across organizational entities to address complex problems.

The design approach deviates from classical military operations planning in at least three crucial ways: problem understanding, inclusion of stakeholders, and basic world-view. First, classical military operations planning follows a linear, continuously convergent process, whereby the problem is first described and then analyzed

in a supposedly objective way, then strategies and plans are developed in increasing detail (NATO 2019 3–1 and 4-4; NATO 2013a; Zweibelson 2017: 155; Lauder 2009). Although Western military planning, including European military planning, does include feedback loops, it still to a large extent relies on getting the first problem definition and analysis “right.” In contrast, the design approach features a continuous triple-loop learning process that seeks out multiple problem-framings and many ways of dealing with the problem(s) along with a continuous attention toward one’s own values and assumptions.

Second, while classical military operations planning often include many participants, these participants are usually selected from within the military organization, based on their organizational belonging, (i.e., by their functions and expertise among the planning staff). Stakeholders external to the military organization are only included to a limited extent and usually with reference to their specific expertise or doctrine-defined function such as Cultural Advisor or Legal Advisor. Adhering to doctrines and organizational hierarchies might therefore restrict the inclusion of divergent perspectives in the planning process. While some parts of the European defense are developing small and agile-matrixed organizations for specific purposes, European militaries largely organize themselves as modern bureaucracies divided into distinct branches, sections, and expert entities. This organizational form sits well with the planning paradigm, but its tendency to create isolated silos that lack horizontal integration complicates both intra- and inter-organizational coordination and collaboration promulgated by the design approach.

Finally, the classical military problem-solving approach largely rests on the assumption that the world is knowable, foreseeable, and manageable through systematic observation, analysis, and repeatable processes (Paparone 2013; Gracier 2017; Martin 2017; Jackson 2013; Naveh et al. 2009; Lauder 2009; Banach 2009; Bousquet 2008). Drawing from systems theory and complexity theory, design emphasizes the existence of multiple perspectives, as well as emergent and adaptive patterns of behavior. As such, design and classical military problem-solving processes seem not only at odds in their practical approaches but also in their theoretical foundations and assumptions.

While European defense forces continue to adhere to the institutionalized and codified forms of military planning and organization, design is becoming an emerging niche across the continent. For example, Scandinavia and other North and Central European countries provide a fertile social and political context for design uptake in society at-large. They are high-trust societies with low social power distance (Krogh et al. 2022). Their public school systems introduce and harness several of the values that design promulgates, including empathy, problem-framing, creativity, collaboration, and “reflective thinking” (Agger et al. 2015). Their military cultures are less hierarchical, and their operational planning “staff-driven” rather than “commander-driven.” Furthermore their defence forces generally accept that lower-ranking soldiers influence and challenge their commander in delineated planning processes (Libel 2016). In recent decades, many European defense forces have further been reconfigured into smaller, professional, agile forces that are structured and organized to be able to plug into larger operations and campaigns such as NATO

operations or other combined engagements (Frisell and Pallin 2021; King 2011: 33–40; Howorth 2002). These organizational features are all conducive to design thinking, since they support exploratory problem understanding and problem-solving processes that involve both higher- and lower-ranking officers, as well as international collaborators with different world-views. Nevertheless, the design movement remains nascent in European defense forces, which we now move on to consider in detail.

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## Prevalence and Use of Military Design in Europe

While European defense forces have retained their overall approach to operational planning, the design approach to complex problem-solving is gradually finding its way into their military doctrines, practices, and educational curricula, although still in somewhat limited and experimental ways (cf. Porkoláb and Zweibelson 2018; Wrigley et al. 2021).

In the NATO body of doctrines, to which most European countries adhere, there is a growing awareness and acknowledgement of the interconnectivity and codependence among things, organizations, and domains. There is also a broader recognition of the need to think holistically and systemically. Consider for instance the NATO Comprehensive Operations Planning Directive (COPD) and its “comprehensive approach” (NATO 2013a). The COPD is the basic document for planning staffs within the NATO military command structure and the NATO force structure. It provides a common framework for collaborative operations planning within a comprehensive approach strategy. Inherent to the comprehensive approach is NATO’s recognition that “the military alone cannot resolve a crisis or conflict. There is a need for more deliberate and inclusive planning and action (...) that allow for both military and non-military resources and efforts to be marshalled with a greater unity of purpose” (NATO 2013a: 1–2). NATO leadership documents also emphasize the increased need for both critical and creative thinking and praxis (NATO 2020); which are also central to the important concept of “multi-domain operations”. Likewise, the current armed conflict in Ukraine has demonstrated the need for creativity both in planning and on the battlefield, including the capability to expand domain dimensions, for instance in regard to information activities.

However, NATO doctrinal support for design is still limited and perhaps in some respects declining. First, it can be argued that the few NATO doctrines mentioning design predominantly include the notion *in word only*, as they do not further elaborate on *how* to work with it in practice. Second, even though the COPD notes that the operating environments of modern crises are typically complex and continually changing (NATO 2013a: 1.6.), the established NATO planning process – the “Joint Operational Planning Process” – remains informed by the military functionalist paradigm (Paparone 2013; Pikner and Spisák 2013; Zweibelson 2017: 155). In other words, the overall process maintains a linear, causal, and somewhat mechanistic approach to planning and problem-solving. Third, the 2013 version of the NATO Joint Planning doctrine, AJP-5, mentioned design as one of three analytical



approaches within Operational Art that might be pursued by commander and planning staffs (NATO 2013b: 2.10). However, this entire section on design as a possible approach was removed in the 2019 version of the AJP-5 (NATO 2019), leaving European defense forces wondering if NATO still approves of the approach or not.

Equally, very few European countries include design in national doctrine. Take the Dutch Army, which introduced design methods into their planning doctrine in 2014. The 2014 D.P. 3.2. Land Operations identifies three possible methods to be used in operations planning. One of these methods is “tactical design” (Van der Veer 2018). The publication notes that tactical design is not a NATO term but in line with UK tactical planning concepts. While the publication does not elaborate further on the concept of tactical design, it was nevertheless one of the first among European military doctrines – and remains today one of very few – to include design into planning frameworks. Jackson (2020) notes with reference to the UK doctrine publication *Understanding and Decision-Making* (UK MoD 2016) that British doctrine “stands out because it expresses many design concepts while avoiding the word ‘design’ entirely” (Jackson 2020: 34). It has been argued that other European nations are also approaching design perspectives in their doctrine, without directly labelling its design. Zweibelson et al. (2017) suggest one such example to be the Handbook on Civilian-Military Cooperation published in 2016 by the Swedish Armed Forces (Forsvarsmakten 2016). They also point to the Swedish Chief of Armed Forces’ and the Civil Contingencies Agency’s Director General’s launch of a Joint Strategic Planning Procedure for the Total Defence as an example (Zweibelson et al. 2017). These doctrinal developments toward whole-of-government and even whole-of-society approaches fit well with design’s holistic and inclusive focus. However, as these examples show, design is generally still not included in any keystone European military doctrines, and the doctrinal underpinning of design in Europe remains weak for the time being.

Operating under an unstable institutionalization of design at the strategic level, European defense forces have generally adopted design and its appurtenant approaches and methodologies in a less systematic and more “bracketed” fashion at various levels and within various sections of the military organizations. In the absence of a comprehensive approach to introducing design as an integral part of their formal training, European militaries have so far mainly relied on grassroots efforts, smaller communities of practice, specific projects, and singular educational courses. In contrast to, for instance, the United States and Canadian defense forces, Europeans have generally been reluctant toward using “design” as a term that designates a specific path or a distinct community within their military organizations. They consider it more as a methodological tool set that fits well with existing leadership trends valuing diversity, inclusion, critical thinking, and creative practices.

The inspiration for adopting design methodologies among European defense forces stems primarily from other militaries, notably the United States, Canada, and Israel, from where committed military analysts and practitioners have contributed to engaging the Europeans in the design dialogue. Through the transatlantic

cooperation in NATO, developments in the United States and Canada also make an impact in Europe. However, commercial design methodologies employed by private companies (such as IDEO), public design institutions (such as Stanford D-School, the Danish Design Center, and MIT), and academia also serve as important inspiration. Defense colleges in Hungary, Poland, Denmark, and France, to name a few, have hosted innovation and design conferences in recent years to highlight the relevance of design-related theories and perspectives for military analysis and practice. Concurrently, a variety of design thinking methodologies based in complexity theory, systems theory, innovation theory, and constructivist thought have been included in the teaching curricula of the design courses taught at various European defense colleges. For instance, the French *École de Guerre* has worked with design thinking as part of its courses since 2021; Sweden has taught design through the *Joint Special Operations University* (JSOU) since 2019; and Poland has expanded its own style of design into its Captain, Major, and Colonel education since 2018 (Harezlak et al. 2020). The NATO School in Oberammergau has provided annual design courses based on an adaptation of JSOU design since 2018. After a period of disruption due to COVID-19, however, it remains to be seen whether these will be resumed. The NATO school also provides an *Alternative Analysis Course* which builds on critical thinking theories and teaches alternative analysis techniques in support of problem-solving and decision-making. This course is currently still available.

The lack of a common NATO or European doctrine on design – and the absence of a single institution teaching design for all European militaries – results in considerable variance with respect to how European militaries understand and value different aspects of design. The following section presents three illustrative cases of recent design practices in European defense forces.

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## Illustrating the Evolving Design Niche in European Defense Forces

While currently still a niche in Europe, the design agenda develops at multiple levels and settings in European defense forces. This includes, for example, research-based calls for change and military design recommendations in commissioned reports, design teaching at European defense colleges, and design approaches to strategic and operational analysis and praxis. Countries such as France, the UK, Hungary, Norway, Poland, Sweden, and Denmark have experimented with applying design approaches in relation to a variety of defense-related themes.

In this section, three specific examples illustrate the evolving European interest in military design and its application: the *Emergent Concepts Team* (ECT) that applies a military design approach in the UK Ministry of Defence; the design course *Design Thinking in a Military Context* at the Royal Danish Defence College; and the *organizational redesign of the École de Guerre* in Paris. The first example relates to practice, the second to education, and the third to organizational change. All three

cases provide an in-depth contextual feel of the European variations in the design field.

## **The Emergent Concepts Team in the UK Ministry of Defence**

In 2020, Colonel Edward Hayward established the *Emergent Concepts Team* (ECT) to address complex strategic and operational issues and problems in the UK Defence. Commissioned by the UK Ministry of Defence but operating cross-functionally and inter-organizationally, the ECT reached out to ministries, other public authorities, and academia. The team was staffed with one full-time position (Hayward) who mobilized relevant resources inside and outside of the military depending on the specific problem to be addressed. The aim was to link diverse thinkers and practitioners and to apply theories from diverse fields to consider issues that were deemed systemic, messy, and complex or even chaotic by those who were tasked with handling them. While the ECT was initially limited in scope, it soon built up and eventually included some 60 people – coming and going depending on the subject – working on myriad projects. Examples of issues considered by the team range from strategic competition analyses to operational issues, for example, the future of conflict, artificial intelligence (AI), and decision-making, as well as organizational challenges such as mental health and force structure. Among other things, the ECT developed a psychological targeting tool, a new concept for Risk Analysis, and suggested a restructuring of Army reporting to favor perishable insight over the many updates that are otherwise part of the usual battle rhythm in military headquarters.

The method developed for the team included seeking to understand the multitude of factors and perspectives that were framing and shaping the issue or the problem to be addressed. In this step, the key perspective was to see all related issues and problems as entangled parts of a complex, adaptive system. It was central for the ECT to be aware of how they as analysts were actively creating, selecting, and using their problem-framing (for instance, in regard to the establishment of the boundaries and decisions around what to include within their view on the system). Hayward succinctly describes this process as paying particular attention to “the awkward things that people tend to leave out” (cf. personal communication with Hayward, 2022). To do this, Hayward spent time and effort selecting and then sustaining diverse, bespoke networks for each project, with the aim of combining these cross-disciplinary perspectives and experiences to create novel solutions. “The ultimate success,” Hayward notes, “was not just bringing new people from lots of different areas to work together on a project and devise new outcomes, but to forge this super team to work on new areas that were not usually in their field and bring their past skills to bear in new ways – and create new learning as a combined perspective” (cf. personal communication with Hayward, 2022).

At the same time, the team was oriented toward praxis and aimed at turning the design inquiry into something useful such as a brief or a set of questions or recommendations. In this, they were preoccupied with locating responsibilities,

ownership, and outcomes in order to support decision-making (including the identification of what decisions need to be made). Being able to find the right strategic sponsors for any project and to understand what they required – as opposed to what they might initially be seeking – was important. The ECT did not consider design versus planning in an either-or perspective but worked on linking the two approaches as both-and (cf. personal communication with Hayward).

Hayward notes that while the ECT took important steps in advancing design thinking in the UK Ministry of Defence, it did face a number of challenges along the way. One challenge concerned the organizational anchoring of the ECT. The team was, by its own design, “wrapped around” the extant military structure in order to build and integrate around the military system. This provided some freedom of methods and ensured that the team was working for the entire organization, where a variety of people (including high-ranking generals) came to them with requests for support. On the other hand, Hayward notes that while this structure meant that the team had broad access to relevant networks, it was also challenged by capacity, since new networks of participants had to be created for every single project. Furthermore, the loose anchorage meant that the team had little authority to implement or shepherd the changes they recommended. Hence, it can also be considered whether the work of the ECT would have been better served if carried out by central agents/units more firmly anchored *within* the organization (cf. personal communication with Hayward, 2022). The experiences of the ECT demonstrate how design methodologies can illuminate new opportunities in military organizations, while highlighting the importance of considering the organizational nesting of design initiatives and approaches.

## Design Teaching at the Royal Danish Defence College

The introduction of design methodologies in European defense forces is underpinned by education at the European defense colleges. In recent years, various European defense colleges have tried to facilitate design learning through various ways of combining theory and practice. One example of an attempt to do this is the design course *Design Thinking in a Military Context*, provided by the Royal Danish Defence College (RDDC) for students at Master’s level since 2018. Akin to the Joint Special Operations University (JSOU) approach, this course is framed as a mixture of theory and practice with a strong emphasis on embedding design practice in a meaningful way in the specific military organizational context and practice. Prior to the coursework, participants are asked to describe one case from their present work – a task, a vision, or a problem – that they are actively involved in and working on, and which includes multiple stakeholders. Throughout the course, participants work on their case by continuously relating it to theory and practice. Moreover, they must conduct micro-interventions, interviews, and experiments in their working life throughout the duration of the course. In this way the students are able to learn and experiment with applying design not only as theory but as a set of practices in their military working life. By this approach, the RDDC is also able to get

continuous feedback as to what works and what are specific challenges in regard to applying design methodologies in a military setting.

A research-based evaluation of the 2018 and 2019 courses investigated how elements from design thinking and practice are selected, translated, and enacted by participants (Heltberg 2022). The evaluation also had a broader focus on what participants experienced as opportunities and challenges as a result of introducing and using design concepts and methodologies in a military context. The evaluation shows that RDDC students found it particularly important to take organizational structures and cultural issues into account when introducing design in military contexts. In this regard, the evaluation identified three types of organizational challenges that arose when applying design practices specifically in a military setting. These were labelled “invisible,” “homeless,” and “transversal” challenges (Heltberg 2022). It was noted that the “design gaze” at times foregrounded problems or challenges that had otherwise been rendered homeless or invisible, either by institutional sectioning and the general allocation of tasks and concerns to specific persons or entities, or by an institutional preponderance to taking for granted that existing procedures, solutions, and ways-of-doing are optimal. Furthermore, it was noted that while singular staffs in military organizations may know and have sympathy for design approaches, the actual use of design methodologies is easily challenged. To a varying degree, course participants found it difficult to take up and apply design methodologies by themselves in a military organization that is hierarchically sectioned and structured and is still relying on traditional planning methodologies. (Heltberg 2022). Based on this insight, the RDDC decided in 2019 to provide a specific design course for staff working together in one and the same branch. The aim was to ease the implementation and routinization of design methodologies, as staff who were already working together would concurrently be introduced to design methodologies. Due to subsequent structural changes in the organization, the possible effects of the course were not followed and documented.

## **The Organizational Redesign of the École de Guerre**

As a third example to demonstrate the current diversity of the uptake and development of military design in Europe, this section turns to the experiences related to the organizational redesign of the École de Guerre in Paris. (This section primarily builds on information retrieved from <https://ecoledeguerre.paris> (Nov. 2022) and personal communication with Rear-Admiral (ret.) Pierre-Marie Borgeal, former Director of the Department of Leadership and Innovation at the École de Guerre.)

Founded in 1751 by Louis XV, the French École de Guerre has educated officers from all branches of the military, including a substantial number of officers from countries abroad. In 2015, the school embarked on a design journey dedicated to transforming its educational approach and program. While the school wanted to maintain its high standards in operational planning, it also wanted to prepare officers – practically and intellectually – for the various levels of complexity they would encounter in the future. This included preparing officers for the battles of influence

they would have to wage within the military bureaucracy. The school also wanted the students to learn to develop and share sensemaking in an emergent world and to act purposely and astutely in the mist of complexity and uncertainty. A key tenant behind the transformation was the proposition that military leaders will face unprecedented levels of intellectual as well as practical diversity, complexity, uncertainty, and unpredictability in future. Rather than providing students only with “fixed” knowledge that might soon become obsolete, the school wanted to grow military leaders characterized by open-mindedness, responsiveness, initiative, creativity, commitment, the ability to act outside of one’s comfort zone, and the understanding of decision logics and systems thinking.

In the exploratory phase of the transformation journey where all staff were involved, one approach was to conduct experiments among small groups of students. If an experiment worked well, the school would expand the solution. As a key didactic and organizing factor, students were encouraged to explore any and all domains they found pertinent to their education. Accordingly, they were asked to initiate, set up, manage, and participate in relevant thematic “committees.” Examples of committees students created included “Nuclear Deterrence” and “Thinking Differently and Innovation.” Each committee then reached out to staffs and external experts to inform relevant inquiries. In this way, students were given greater active responsibility for their own learning, which created an atmosphere of experimentation, transformation, and enthusiasm. This also provided the school with timely, continuous feedback as to where students needed to learn and develop. Additionally, this networked-based organization created significant agility, giving the school freedom to enrich courses and curricula depending on desiderata and staff validation.

The transformation of the education approach and program was embedded in a so-called ‘9 Pillars pedagogical design concept’, with three pillars supporting each of three dimensions. The three pillars supporting the *mindset* dimension focused on: (i) Personalization; (ii) Accountability/empowerment; and (iii) Open-mindedness. The three pillars underpinning the *intellectual and operational* dimension focused on: (i) Understanding our conflicting world; (ii) Understanding the defense/security sector eco-system, policies, and military room for action; and (iii) Leading operations. Finally, the three pillars sustaining the *reflexivity and the leadership* dimension focused on: (i) Learning about oneself; (ii) Thinking differently (out of the box), having a creative mindset; (iii) Influencing and convincing.

The staffs designing and undertaking the transformation were not acquainted with design theory when they began the project. However, when they later encountered design approaches – among other things due to a partnership with the Canadian Forces College – they realized how their journey had in all aspects been a design journey: “a reflexive, conceptual, practical, and experimental approach to creating an entire new education programme for future military leaders,” says Pierre-Marie Borgeal. Without knowing of design methodologies, they were nevertheless able to explore and make use of design concepts and practices in their consolidation of the new educational approach. For instance, they incorporated activities related to debating, networking, and team collaboration into the school curricula in order to enhance officers’ self-reflection, as well as their ability to transform and apply more

flexible frames of reference, and to understand and shape their interactions with the operating environment. One key take-away from the transformation process, according to Borgeal, was the realization of the power that lies in connecting multiple perspectives and knowledge domains open-mindedly and creatively to build a shared awareness and find new ways to grasp an emerging reality in a complex and changing world.

Today, the transformation has set up staffs and students with a mindset of openness and curiosity to consolidate or conduct further changes where needed. In the words of Borgeal, the officers “are given the fundamentals to be able to create what is needed, but does not yet exist,” so that the French armed forces become continuously more relevant and efficient in a world that emerges from itself at an accelerated speed.

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## **Future Avenues for Military Design Research and Practice**

The European militaries of today are bound to specific practices and ways of thinking through doctrines, norms, values, recruitment processes, and education. NATO doctrines influence European militaries, and while the withdrawal of design as a distinct focus in the Joint Allied Doctrine certainly does not support the development of design in European defense forces, many national defense institutions have, as shown, experimented with and incorporated design approaches in strategic or operational planning efforts. NATO leadership development and its future orientations also seem to align clearly with many of the fundamental propositions foregrounded by design thinking.

Academic research and practice-oriented analyses alike have pointed to the relevance of continuously developing and including design approaches in defense forces. In this vein, a number of contributions point to concrete development opportunities. Among these are commissioned reports, although the impacts of these recommendations are still to be seen. For example, in a report commissioned by the Dutch Ministry of Defence, the Hague Centre for Strategic Studies has recommended that the Dutch military use design methodology for developing innovative and legitimate stabilization operations (De Spiegeleire et al. 2014). Particularly, they propose that key public and private stakeholders come together to co-design a number of stabilization options and assess them based on collaboratively developed criteria. The assessed options should then inform a political decision-making process prior to a military operational planning process. The suggested model serves as a case of possible military design in a European context, but remains a tabletop exercise that awaits implementation.

In a journal article discussing possible German responses to the increasingly complex battlefield of the twenty-first century, Colonel Christof Schaefer (2009) suggested that the German army engage in institutional military design. He argues that new interagency design groups should develop new visions, strategies, and lines of effort across functions and link innovative ideas to relevant decision-making at all levels of the institutional hierarchy. Schaefer is particularly interested in these

changes taking place at the ministerial level and the higher commands and offices. He suggests that the design groups should foster organizational development by deliberately bringing about “creative tension” between military or political leaders. The recommendations demonstrate how European debates on military design involve arguments relating to current challenges for more comprehensive integration of design approaches and practices in defense ministries and organizations.

The European defense colleges also play an important role in building design knowledge, skills, and capabilities at all levels of the military organizations (cf. Libel 2016). Developing methods for *teaching design* is thus important for advancing design within military communities in Europe. Design teachers should bear in mind that military design is still a niche in Europe. They must facilitate the interest in design thinking in a military setting and work in the participants’ “zone of proximal development.” This means linking new knowledge to known concepts and scaffolding learning of new skills on the grounds of existing competencies. Focusing on connections between military planning and design, particularly how design can inform planning and become a “planning ally,” is therefore conducive for design learning in the current European context. An instructive metaphor is the cooperation between architects, engineers, and construction workers: architects creatively construct a holistic vision that engineers translate into plans that builders follow through specific actions or activities. In much the same way, design helps construct scenarios and pathways for action that help military designers, planners, and operators to better understand and navigate contemporary threat landscapes (Olsen 2018). While the conceptual distinction between military planning and design is initially helpful for clarifying how design differs from known practices, teachers should help close the gap again in order to promote the uptake of design methodologies, knowledge practices, and modes of reasoning in European defense forces.

For the same reason, European defense colleges and military personnel should consider how institutionalized military capabilities can support the uptake of design methodologies. One such capability is military fixedness, which makes military organizations and its members ready to act with sparse information and high risk. Another is the widespread capability of working with tangible materials such as maps, overlays, and terrain tables as tools for thinking and creation, which is also central to design. Understanding and working with these and other relevant connections between the new design approach and more traditional planning approaches that have long dominated European military organizations is an important avenue for military design research and practice in Europe.

It remains open as to how to approach this institutionally. An example of a possible way forward in this regard comes from the Royal Danish Defence College (RDDC). Staff at the RDDC have considered the possibility of establishing a recurrent “design workshop” or “design lab,” possibly with a fixed duration limited to a few months per year. In the lab, staff, teams, or units from all parts of the defense would have the possibility of bringing up current tasks and problems for consideration, and working on them with support from an in-house design team. The aim would be to introduce design methodologies to address specific problems in order to



provide new solutions and create a space for trying out new ways of approaching and dealing with complex problems in the military organization.

This strategy of “institutional bracketing” would provide participants with a role where it would be legitimate to think and act differently while engaged in the lab: They would have the opportunity to reframe problems and assigned end-states, challenge assumptions, bring up wild ideas, make mistakes, and so forth. At the same time, it would provide the organization with a safe zone: it could rest assured that the enactments would not question or undermine the entire system but remain confined to specific spaces and challenges. Yet this approach may also be the Achilles’ heel of the strategy, namely that design would then only unfold within limited spaces and therefore never really disturb or fundamentally enrich the organization at-large. However, this is a point that has two sides to it: organizational change can either be made slowly or quickly, depending among other things upon the appetite for change. As of yet, this suggestion remains on the drawing board.

As the above examples demonstrate, developing design in European defense forces also requires substantial shifts in institutionalized mindsets. To mention a few, there is not just one correct definition of a complex problem, there is not just one optimal solution or end state, and the goal is not always to get things right without making mistakes. Working across intra- and inter-organizational boundaries must become an institutionalized mantra and embedded organizational principle in order to attune European defense forces to the increasingly complex, unstable, and unforeseeable battlefield of today and tomorrow.

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## **Concluding Remarks: Military Design as an Evolving Niche in Europe**

To conclude, recent changes in warfare have generated a sense of urgency among military practitioners in European defense forces, who recognize the need for novel design approaches and methods for understanding and managing contemporary threats and conflict. Providing an overview of the current state of European military design, this chapter has shown how military design is an evolving niche in European defense forces. It has defined military design as an alternative to a still strongly institutionalized military planning doctrine; shown how the design agenda has evolved at multiple levels and settings in European defense forces; and presented illustrative cases and recommendations for further integration of design approaches and practices in European military organizations and defense colleges.

European military design continues to develop as military scholars, strategists, planners, and teachers continue to explore new and innovative ways of deploying design methodologies in military practice. European researchers and academics advance the theoretical frameworks for design-inspired approaches and practices; European defense ministries and organizations form design teams and labs that provide institutional spaces for creative problem-solving; and European defense colleges offer educational courses that build design knowledge, skills, and capabilities at all levels of the military organizations. Even though European defense forces

have generally adopted design in a bracketed fashion, these grassroots efforts and small communities of practice hold the potential to grow into a more mature military design sector in Europe. As of today, however, design remains one of several methodological tools, which military personnel may use to construct scenarios and pathways for action that help European soldiers navigate contemporary and future threat landscapes.

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## Cross-References

- ▶ Epistemology and Military Sciences
- ▶ Methodology and Military Sciences
- ▶ Military Design
- ▶ Military Leader and Leadership Development
- ▶ Military Organization
- ▶ Military Profession
- ▶ Ontology and Military Sciences
- ▶ What is Military Leadership?
- ▶ What is Military Operations?

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# Small Militaries and Operational Art: A Strange but Beneficial Pairing

Aaron P. Jackson

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## Abstract

This chapter examines why and how small militaries have adopted operational art despite not possessing large enough forces to apply the concept in the manner it was originally intended. First, it establishes context by summarizing three large military operational art traditions – the German, Soviet, and American traditions. Second, it examines why small militaries have adopted the concept, positing that it is due to a mixture of interoperability and cultural reasons. While there are

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A. P. Jackson (✉)  
Australian Department of Defence, Adelaide, SA, Australia  
e-mail: [aaron.jackson@defence.gov.au](mailto:aaron.jackson@defence.gov.au)

many potential ways to define “small militaries,” they are defined here as either comprising less than 100,000 personnel, or as fielding land combat forces of one division or less in size. By either definition, these militaries are smaller in scale than those required to apply operational art as conceptualized within the three large military traditions summarized. Third, three case studies examine how small militaries have adapted and applied the concept: those of Australia; Canada; and the Nordic and Baltic countries. Despite facing different strategic situations, the way these militaries have applied operational art has been very similar. All have taken a functional approach, which de-links operational art from its original emphasis on scale. These militaries have used this modified concept to enable them to operate more effectively alongside their larger allies, America in particular.

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**Keywords**

Operational art · Operational level · Small militaries · Australia · Canada · Nordic countries · Scandinavia · Baltics

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**Introduction**

Operational art is commonly understood as sitting within “the grey area between strategy and tactics” (Olsen and van Creveld 2011:1). It encompasses the planning and conduct of campaigns, sometimes called major operations, which link and sequence tactical actions to achieve strategic objectives within a theatre of war. Operational art emerged in response to military challenges of the mid-nineteenth century. Primarily, these were challenges of scale. They included substantial increases in the size of armies, new technologies that expanded the scope of command requirements, and the incorporation of new weapons and logistics systems. The sum of all this was the need to control military operations at much larger scale and over much longer durations than before. Operational art emerged to fulfill this requirement.

Scale is therefore central to the concept. Its early progenitors, the German military, practiced operational art at the Army and Army Group levels. Its consolidators, the Soviet military, did likewise, though they called the latter formation Fronts instead of Army Groups. Conceptual late-entrants, the American military reduced the scale to Armies and Divisions – the Division being the smallest of these organizational levels, averaging between 10,000 and 20,000 personnel. At the same time, the Americans broadened the concept from its land-centric roots to encompass the activities of joint forces as well.

Though operational art is well suited to coordinating the maneuver of forces at these large scales, most contemporary militaries do not employ such large forces. For example, 20 out of 30 NATO member states field land forces with maneuver elements that are one Division or less in size. Using another measure of military size that may be more suitable to joint conceptualizations of operational art, 21 out of

NATO's 30 member states have active military forces numbering less than 100,000 personnel, including members of all services (International Institute for Strategic Studies 2021:Chaps. 3–4). By both measures, operational art is ill-suited to the small scale of forces that these militaries can generate. Yet several of these smaller militaries have incorporated operational art into their doctrine and practice. Several non-NATO small militaries have done likewise, including Australia and New Zealand, as well as the small militaries of several former Soviet states.

This situation raises important conceptual and practical questions that this chapter seeks to address. Foremost, why have several militaries that are too small to employ operational art at the scale it is traditionally conceived adopted it into their own doctrine and practice? Second, how have they done so? Third, what have been the benefits and pitfalls of this practice? Before addressing these questions, this chapter summarizes three large military operational art traditions, to provide context and a point of departure for subsequent discussion. Next, an examination of why small militaries have adopted operational art unpacks the practical interoperability reasons as well as the more abstract cultural reasons for them having done so.

Three case studies – Australia, Canada, and the Nordic and Baltic militaries – give examples of how different small militaries have applied operational art. These case studies show that despite facing different strategic challenges, all of these small militaries have settled on very similar approaches to applying operational art. Each has de-linked the concept from its original intended scale by taking a “functional approach.” This has been accompanied by the establishment of operational level headquarters that apply this altered form of operational art jointly across services.

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## Three Large Military Operational Art Traditions

It is generally agreed that operational art's predecessors date to either the French Enlightenment or to Napoleon. The former is said to be exemplified in Guibert's 1772 *Essai General de Tactique*. This *Essai* posited that the “science of tactics” consists of two components, the first simple and limited in scope; the second sublime and complex. The first of these is today called “battlefield tactics.” The second component Guibert considered “the science of generals,” and the most decisive aspect of a campaign (McLeod 2013:55). It was primarily concerned with the march of armies before and between battles, though it also addressed logistics and orders of battle, particularly at Division level. Notably, Guibert coined the term “grand tactics” to describe the synchronization of these elements (Palmer 1986:105–12).

The latter of operational art's generally agreed predecessors is Napoleon, who is often cited as its first practitioner. This is because he introduced then mastered maneuver in combined arms Corps within the post-Revolutionary French Army, and because of his supposed ability to intuitively grasp linkages between strategic considerations, campaigning and battlefield tactics. This distinction was initially attributed to him by mid-nineteenth century scholars, who were attempting to diagnose the causes of his success. Jomini was particularly notable in this regard,

and it is due to him that Napoleon is now considered by many as the first operational artist (Gat 2001:123–4).

## The German Tradition

Regardless of its conceptual predecessors, the first of three undisputed operational art “traditions” emerged in the mid-nineteenth century (this term has been borrowed from: English 2005:10–20). Although theorists such as Scharnhorst and Clausewitz influenced this tradition, it was not explicated until the 1860s, when Moltke the Elder reorganized the Prussian General Staff. This reorganization greatly contributed to Prussian victories over Austria in 1866 and France in 1871. Molke’s reforms, followed quickly by these two Prussian victories, heralded the emergence of the German tradition (Showalter 2011:38–44). This tradition evolved over the next 80 years, culminating in the successful “Blitzkrieg” operations of the early stages of the Second World War.

The German tradition was established in response to emergent mid-nineteenth century military problems. These included the impact of railways on the maneuver of forces, the incorporation of telegraph communications into command structures, and an increase in scale that necessitated not only the mobilization of armies in the field but also extensive supporting efforts in rear areas. The First World War added additional challenges, particularly due to increased firepower and the imbalance this caused in favor of defense over offense (Showalter 2011:44–8). Conceptual adjustment in response to these conditions continued through the interwar period, shaping the ultimate practice German operational art during the Second World War (Posen 1984:179–219).

Throughout this period, the Germans never used the term “operational art.” Although they used “operation” and “operational” when referring to the movement of forces between battles, in theoretical writings, they either referred to “grand tactics,” or described what is now called operational art as a component of either strategy or tactics. Nomenclature notwithstanding, the approximately 80-year trajectory of the German tradition contained several thematic consistencies that adapted in light of changing circumstances. These included the size and scope of forces under discussion – Armies and Army Groups – and linkages between front and rear areas within a theatre of operations. Despite variations in specific operational approaches, efforts focusing on detailed physical and moral destruction of the enemy’s forces remained central to German operational art (Showalter 2011:38–56).

The German tradition also emerged in response to a geostrategic challenge faced first by Prussia, then by post-unification Germany. This challenge was that Germany’s position in central Europe combined with its domestic lack of strategic resources to necessitate quick wars and decisive victories, yet the technology and scale of warfare in this era made protracted and indecisive wars probable. German operational art sought to resolve this paradox by sequencing tactical actions to rapidly overwhelm then destroy enemy forces, the aim being to compel enemies to sue for peace before factors came into play that would generate an indecisive



outcome. When executed well, as in 1866, 1870, and 1939–1941, this approach resulted in spectacular successes. When executed poorly, as in 1914–1918 and 1942–1945, the results were just as spectacular but abysmally so (Showalter 2011:38–56).

The key determinant of success or failure was the operational approach employed on each occasion. Yet successful operations, such as Moltke's flanking maneuvers and Guderian's and Rommel's Blitzkrieg tactics, are likely to have been considered as coherent methods only in hindsight. At the time, they were largely ad hoc adaptations to dynamic situations (Frieser 2005). This indicates the importance of another aspect of German operational art: a military culture that emphasized speed, maneuverability, and flexibility; or, in a word, *auftragstaktik*. When comprehensive staff planning and war games led to development of sound operational approaches, these became springboards for German operational artists to achieve success by rapidly adapting to dynamic circumstances. When initial operational approaches were unsound, such as the Schlieffen Plan, initial successes could not be consolidated no matter how adaptive commanders were in the field (Showalter 2011:38–56).

Comprehensive prewar planning together with operational approaches enabling rapid adaption therefore formed the basis of the German operational art tradition, which focused on and enabled comprehensive destruction of enemy forces when successfully employed. Ultimately, this tradition fell into disuse following the Second World War. In West Germany, the nature of the *Bundeswehr*'s approach became highly defensive in nature (Showalter 2011:56–8). In East Germany, the *Nationale Volksarmee* came under the influence of the second operational art tradition: that of the Soviets.

## The Soviet Tradition

It is the Soviet tradition that gave “operational art” its name. Specifically, Svechin is credited with having coined the term in 1922, describing it as a link between strategy and tactics (Kipp 2011:65). A century later, this intermediary position remains central to the concept. Svechin's writings focused primarily on the strategic dimensions of war, however, and it was his main antagonists in the Soviet military debates of the 1920s that drove operational art's detailed theoretical development.

This was in part due to each camp's preferred strategic approach. Svechin posited the existence of two distinct strategic approaches, annihilation and attrition (Harrison 2013a:102–7). The first focused on destruction of the enemy's forces. The second emphasized what is referred to in contemporary Western military theory as “an indirect approach,” involving the coordinated employment of economic, social, and military means to overwhelm all aspects of an enemy state. A longer-term strategy, it involved building up all three aspects of national power before decisive defeat of the enemy was possible. Svechin advocated an attritional approach on the grounds that the First World War had shown that annihilation was no longer a

feasible means to achieve victory against fully mobilized industrialized states (Harrison 2013a:102–7).

Svechin's theory was pitched in the mid-1920s, when the Soviet Union was surrounded by potentially hostile capitalist states, isolated, and economically backwards. His opponents, chiefly Tukhachevskii, advocated strategies of annihilation. While unrealistic in light of the Soviet Union's situation, they were more aligned with its revolutionary vision. By the early 1930s, Svechin's opponents had essentially "won" the strategic debate. Theoretical development shifted towards operational approaches to enable the strategy's implementation. In 1929, Triandafillov proposed a concept for a mechanized "shock army" that could break through enemy lines into its rear areas (Harrison 2013b:319–25; 2013c:325–31). Heavily influenced by Triandafillov, Isserson further developed this idea into a comprehensive operational approach, publishing a "Deep Operations" concept in 1936 (Isserson 1936:53–74).

Deep Operations called for combined arms mechanized forces supported by close air support and airborne troops to break through enemy lines at multiple points, drive deep into rear areas, link up, and thereby encircle the enemy, making isolated pockets vulnerable to destruction (Kipp 2011:73). It was an operational approach that emphasized speed, shock, and scale. Like German operational art, Soviet theory was concerned with Armies or Fronts (the Soviet equivalent to Army Groups). Yet this *level* of discussion hides the *scale* that Soviet theorists had in mind. The scale of forces deployed during the Second World War is more telling. In contrast to the approximately 100 Divisions fielded by the Western allies and the 285 Divisions fielded by Germany, the Soviets fielded somewhere between 300 and 400 Divisions (English 2005:13). By mid-1944, they were routinely undertaking coordinated operations involving multiple Fronts (Kipp 2011:81–7).

There were other differences between the Soviet and German traditions. Different styles of command were one of the most significant. In contrast to the German *auftragstaktik*, the Soviets issued detailed operational plans and expected subordinates to strictly adhere to them (English 2005:13–4). Another key difference, according to Naveh, was that the Soviet aim was not *destruction* of enemy forces as an end in itself. Rather, Soviet Deep Operations aimed to achieve *systemic disruption* of the enemy (Naveh 1997:14–6).

The Soviet tradition was not developed seamlessly. Stalin's purge of the Red Army in 1937 led to the execution of several key personnel, including Svechin and Tukhachevskii. This contributed greatly to initial Soviet operational failures during World War Two, with Soviet operational art eventually yielding success only from late 1942. By then, the social and economic aspects of Svechin's strategic approach had also been mobilized. This widened strategic approach enabled successful application of the Deep Operations concept (Kipp 2011:72–87).

Following the Second World War, Soviet operational art was consolidated in the late 1940s. From the 1950s, a strategic focus on nuclear war led to its conceptual ossification. This was partially reversed during the 1970s, when Soviet theorists began to examine the possibility of an initial conventional phase of a future war against NATO forces in Europe (Kipp 2011:87–90). During the 1980s, Western

(particularly American) qualitative technological advances undermined the Soviet quantitative advantage that was central to its operational art. Before the Red Army could adapt to this new operational challenge, the Soviet Union collapsed, leading to the abrupt end of the Soviet operational art tradition. Yet it was not just new American technologies that challenged Soviet operational approaches during the 1980s. To orchestrate the application of its new technologies, the US Army also developed its own new operating concepts. These involved the US Army's development of its own operational art tradition.

## The American Tradition

The third major operational art tradition is American. Emerging in the early 1980s, this tradition is not only the most recent but also the most muddled. The term “operational art” entered the US Army vernacular as part of two linked efforts. First, the US Army sought to overcome its experience in Vietnam, where there was a perceived dissonance between tactical success and strategic failure. Operational art offered a way to ensure that in the future tactical actions would be sequenced and linked to strategic aims (Lock-Pullan 2005:685–7). (The effectiveness of this solution has since come under criticism, especially as the wars in Afghanistan and Iraq have seemed to repeat several of the USA's failures in Vietnam (Crane 2002; Kelly and Brennan 2009).) Second, operational art presented a means for the US Army to counter the numerically superior Soviet threat in Europe (Spiller 1995:6–46).

The initial manifestation of US operational art was the AirLand Battle concept, which first appeared in doctrine in 1982. This concept involved close coordination by Army, Air Force, and Special Forces to simultaneously defeat Soviet first and subsequent echelons through a dual combined arms and air offensive that would blend actions against all echelons into a single battle (Romjue 1984). Though never used within Europe, AirLand Battle is often credited with underpinning the US (and allied) victory in the 1990–1991 Gulf War (Lock-Pullan 2005:694–5). The concept remained in US Army doctrine until the late 1990s, when it was superseded by Full Spectrum Operations, which incorporated additional domains such as electronic warfare and, more recently, cyber. Evident in both concepts, and characteristic of the American operational art tradition overall, is an emphasis on joint coordination between services. This “jointness” is also evident in US military organizations that practice operational art. Primarily, operational art is the remit of US Combatant Commands, which are joint headquarters (Jackson 2018:30–7).

The term “operational level of war” was introduced at the same time as AirLand Battle. This conceptualization of operations as a *level* has since been charged with expanding the role of operational art to include campaign design, which ought to have remained a strategic function. As a result, American operational art has been accused of becoming a strategy-devouring “Alien,” worsening the dissonance between US tactical success and strategic failure instead of overcoming it (Kelly and Brennan 2009:59–63). Institutional politics seems to have been responsible for this conceptual muddling, with the US Army having adopted “the operational level”

either to give US Combatant Commands a better-defined jurisdiction, or to give the Command and General Staff College a better-defined teaching role (Kelly and Brennan 2009:59–63; Kelly 2012:9). Either way, the linking of operational art to specific levels within the US military's organizational hierarchy has been problematic.

Not that US operational art has remained exclusively tethered to either of these organizations. American operational art has an expansive tendency, and it now includes distinct land, maritime, and air variants, in addition to its joint conceptualization having expanded into new domains. In its land variant, American operational art has most often been concerned with the maneuver of Divisions and Armies, and logistics have featured relatively (though not absolutely) prominently. This focus most likely reflects the smaller scale of the US Army historically (Echevarria 2011:137–65). Indeed, arguments have occasionally been made that operational art ought to be practiced by US brigades or even battalions (Wass de Czege 2009:2), both of which are exclusively tactical organizations within the German and Soviet traditions.

These conceptual issues notwithstanding, the American operational art tradition has been both useful and important. During the 1980s, AirLand Battle gave the US Army a focal point for institutional recovery following the Vietnam War. At the turn of the 1990s, it contributed to victory during the Gulf War. In the early 2000s, joint operational art enabled the US military to rapidly defeat both the Taliban and Saddam's regime during the early, conventional stages of the Afghanistan and Iraq wars. Finally, operational art has provided a conceptual framework for the progressive integration of joint forces. Recently, there have been calls for it to take on the same role in an interagency context (Rayburn and Sobchak 2019:633). Operational art has now become so ubiquitous within American military theory that one cannot comprehensively nor accurately discuss American military thought over the past half-century without reference to it.

## Reflections

Reflecting on these operational art traditions, three key themes can be observed. First, operational art as understood by the Germans and the Soviets, and to a lesser extent by the Americans, deals primarily with forces at a very large scale: Divisions and Armies or equivalent-scale joint forces in the American tradition; and Armies or Army Groups/Fronts in the German and Soviet traditions. Second, operational art is about the sequencing of tactical actions within a theatre to achieve strategic objectives. To enable this, each tradition has developed different operational approaches, the most prominent being Blitzkrieg in the German tradition, Deep Operations in the Soviet tradition, and AirLand Battle in the American tradition. Third, within the American tradition, operational art has tended to be linked to a certain level of headquarters, which sits between superior strategic level and subordinate tactical level headquarters.

## Why Did Small Militaries Adopt Operational Art?

Several small militaries today include operational art within their own doctrine and professional military education (PME) programs. For many of these militaries, this incorporation began following the American adoption of the concept in the 1980s. For several others, particularly Eastern European militaries, their first exposure to operational art occurred when their parent states were incorporated into the Soviet Union following the Second World War. Both of these origins indicate that the relationship these militaries have with their larger ally was a primary factor in their adoption of the concept. This relationship tends to be driven by two major aspects: practical interoperability requirements; and more abstract cultural affinities.

## Interoperability Requirements

The first reason for small militaries to adopt operational art is *interoperability*. This is an important consideration for allied militaries, because it enables multinational coalitions to overcome barriers to effective cooperation when working towards common goals. These barriers may include incompatible technologies, equipment, doctrines, rules of engagement, and training and readiness levels (Middlemiss and Stairs 2002:12).

The importance of achieving interoperability increases for smaller militaries, which are more likely to need to operate in coalition with others. They are also more likely to have to rely on allies to provide support such as logistics or strategic lift, which they may not themselves possess in sufficient quantity. Working in coalitions allows small militaries to “place a flag on the map” in the larger ally’s headquarters. Such visibility may result in strategic benefits for the small military’s parent state, such as enhanced information sharing arrangements, or political benefits such as enhanced national prestige or even limited opportunities to shape their larger ally’s strategic objectives (Palazzo 2012:27–30).

Achieving interoperability comes at a cost, however, which is the sacrifice of some degree of national sovereignty in decision-making. Small militaries optimized for interoperability are often suboptimal for pursuing independent national interests on occasions when these diverge from those of their larger allies (Langvad 2014:13–5). Achieving interoperability can also be expensive, especially where technology and equipment are concerned. “It should be clear that, in any military alliance, interoperability is primarily an issue for the lesser powers,” noted Middlemiss and Stairs (2002:14):

This is because it is the lesser powers that must deal with the military equivalent of ‘keeping up with the Joneses.’ Nowhere has this been more starkly revealed than in NATO, where all the members, save in some degree the United Kingdom and France, have found it a perennially daunting challenge to maintain military forces that can operate effectively with the vastly superior military establishment of the United States.

A significant indicator that the need for interoperability with larger allies, the USA in particular, has driven small Western militaries to adopt operational art is the time at which each has done so relative to the US military. This is explored further in the case studies below.

## Cultural Affinities

The second reason for small militaries to adopt operational art is *culture*, specifically military organizational culture. This has a more subtle influence than interoperability needs, and is more abstract and subjective in nature. Organizational culture in general is “the assumptions, ideas, norms, and beliefs, expressed or reflected in the symbols, rituals, myths, and practices, that shape how an organization functions and adapts to external stimuli and that give meaning to its members” (Mansoor and Murray 2019:1). In the case of military organizational culture specifically, it is institutionally tied to joint military organizations and to individual services such as armies, navies, and air forces. Military organizational culture therefore differs from similar concepts such as national or strategic culture (Sondhaus 2006:1–14), though it relates to them because militaries tend to reflect the societies from which they recruit (English 2004:41–60). Operationally, a military’s organizational culture is paramount because it underlies the way a military learns, organizes, equips, trains, and, ultimately, fights (Mansoor and Murray 2019:1–14). A military’s organizational culture determines the operational approaches it takes, including whether or not it develops or adopts operational art.

For small militaries that frequently operate alongside larger allies, organizational culture seems to be more susceptible to incorporating transnational self-identities. This tendency in turn shapes their operations, and the concepts and approaches that underlie them. Coombs (2010:19–27), for instance, discussed the Canadian Armed Forces’ (CAF’s) reasons for adopting operational art. Applying Fleck’s concept of “thought collectives,” Coombs’ explained why this “paradigm shift,” which generated intense intellectual debate in the USA, was virtually unquestioned in Canada. Describing a thought collective as “participants in a definable and collective structure of thought generated by an esoteric circle of authorities, or experts,” Coombs (2010:25) observed that:

One must situate the paradigm shift within the context of a single group of military professionals defined by a common purpose rather than locating it in two distinct groups separated by nationality. . . .The experts within the larger collective were the doctrine writers and then the practitioners of the United States Army. . . .None of the hallmarks of the paradigm shift [that could be] attributed to professional discourse took place in Canada because *it had already occurred in the United States*; the Canadian military implicitly viewed itself as part of a single community of practice that extended across the continent and followed the paradigm shift that had taken place. [Original emphasis]

In other words, the two militaries shared an organizational cultural bond that resulted in members of the small military perceiving themselves as being in the same

professional community as their larger ally. When the US military changed the content of its doctrine, the CAF followed suit by default.

In another study, Farrell observed similar transnational military cultural linkages when applying a hybrid constructivist/sociological analytical framework. Specifically, he identified international “norm transplantation” of professional military identity in a case study of another small military, the post-Independence Irish Army of the 1920s–1930s, which adopted a conventional force structure and accepted control by civilian government despite strong incentives to the contrary. Farrell determined that this was because of officers’ self-perceptions that military professionalism required them to do so. These perceptions resulted from the transnational spread of professional military norms and identity among European, and gradually global, militaries from the sixteenth century onwards (Farrell 2001:63–102). Extending Farrell’s analysis, adoption of operational art by small militaries may be important to their officers’ self-perceptions as military professionals, with the need to generate this professional identity being important enough that it overrides countervailing arguments that operational art may be conceptually suboptimal for their use. Coincidentally, like many other small militaries, the Irish Defence Force today includes the operational level in its doctrine and PME programs (Irish Defence Force 2016; Irish Defence Force, Undated).

Similar observations could also be made about the militaries of several former Soviet states, which adopted operational art under the influence of the Soviet tradition and have since kept its core tenets within their own doctrine and practice. For example, an analysis of the 2020 Nagano-Karabakh War emphasized that “senior Azerbaijani officers [are] a product of the Soviet military education system, and a solid grasp of operational art is evident throughout” their military planning. Their campaign applied a downscaled version of Soviet Deep Operations doctrine, using a force consisting of 18 brigades enhanced by new technologies, most notably the unmanned aerial vehicles and loitering munitions that drew significant media attention during the war (Anglim 2021:10–7). Although adapted to incorporate recent technologies, at its core, Azerbaijani operational art remained Soviet in character.

These cultural links should come as no surprise to students of military history. Gat, for example, examined military thought over a 400-year period and determined that “the centre of military thought has normally tended to follow the centre of military power” (Gat 2001:107). Reinforcing the practical interoperability concerns driving small militaries to adopt operational art has been a cultural affinity with the larger allies alongside which they have frequently operated. Both factors have played significant roles in small militaries’ decisions to adopt operational art.

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## How Have Small Militaries Applied Operational Art?

Having decided to adopt operational art, small militaries immediately face a significant conceptual issue. Operational art is explicitly intended to enable the maneuver of forces that are much larger in scale than those small militaries are ever likely to



deploy. Three case studies are included in this section to provide examples of the different ways that small militaries have addressed this issue. These case studies are: Australia, Canada, and the Nordic and Baltic militaries.

## **The Australian Defence Force**

Historically, Australia's sense of remoteness from Europe combined with its small population has led it to seek major allies that can act as security guarantors. It has found such allies first in Britain and, since World War Two, in the USA (Cheeseman 1999:273–98). As a result, its military history has been one of expeditionary operations conducted alongside these allies. Australia has been consistent in this practice, although it has also been willing to lead military coalitions within its own region (Blaxland 2014:141–207).

Given this strategic context and military history, it is unsurprising that the Australian Defence Force (ADF) adopted operational art shortly after the US military did so. The Australian Army was the first service to do this, incorporating “the operational level” into doctrine in 1985 (Jackson 2013:63). The concept then spread to the other services and joint doctrine. “Operational art” was adopted in 1988, shortly after the USA promulgated the term in its own doctrine. For the next decade, the ADF employed operational art in relation to the dominant Australian strategy of the period, which focused on defending the Australian continent against an ill-defined threat. According to Evans, viewing operational art through the lens of this single strategic scenario meant that “segmented and restrictive thinking dominated the inaugural attempt at developing Australian operational art.” The key operational approach developed in this era, Decisive Manoeuvre, “did not seek to address the spectrum of conflict that was evolving in the 1990s” (Evans 2008:117–8).

Global events rendered this approach outdated by the end of the 1990s. In the early twenty-first century, the ADF's operational approach bifurcated. First, Australia led multinational peace enforcement and peacekeeping missions in its own region, in East Timor from 1999 to 2013, and in Solomon Islands from 2003 to 2013. Here, the ADF's practice of operational art moved out of alignment with its declared operational approaches. Officially, its operational approach remained similar to that of the 1990s. In practice, it was somewhat more flexible as operations were sequenced to transition from peace enforcement to peacekeeping. In East Timor, this sequencing involved the conduct of eight separate named operations. In Solomon Islands, the ADF operation was progressively eclipsed by an Australian Federal Police-led mission that eventually took primacy (Blaxland 2014:185–97).

Second, the ADF contributed to US-led coalition operations in Afghanistan and Iraq. Here, ADF operational art encountered a paradoxical situation. On one hand, formed bodies of troops deployed in tactical roles that linked directly to Australia's desired strategic effects, which were primarily to enhance its alliance relationship with the USA (Palazzo 2012:27–30). On the other hand, a few senior officers embedded in US headquarters regularly practiced operational art on the scale for



which it was originally intended (for example, see: Molan 2008). This too was vital to achieving Australian strategic objectives through the visibility it created. The resulting situation was that ADF officers needed an understanding of operational art to integrate with their US counterparts, yet the ADF itself often failed to apply operational art in its own deployments (Palazzo circa 2011:458–71).

A revised ADF's conceptualization of operational art was promulgated in 2015. At this time, the ADF explicitly developed a "functional approach," in which operational art is "the linking of strategic aims with tactical actions, the synchronisation of operations in depth and the linking of multiple tactical engagements to form an operation, *regardless of scale*" (Jackson 2017:68, original emphasis). The last three words of this description encapsulate the major difference between the ADF's conceptualization and the three major power traditions summarized above. Like the American tradition, the ADF's operational art is joint and has a relatively prominent focus on logistics. It is also primarily though not exclusively linked to a specific headquarters. Today, this is Headquarters Joint Operations Command, the ADF's equivalent to a US Combatant Command but with a global rather than regional jurisdiction (Horner 2007:143–61). Unlike the American tradition, which focuses on Division and Army level, ADF operational art is no longer linked to scale. Whether an Australian Army brigade or battalion is applying tactics or operational art is therefore entirely contextual. If it sequences tactical actions over time to achieve strategic goals, it is practicing operational art.

Applying this conceptualization with hindsight, ADF operations in the Middle East since 2001 can be seen as forming a single campaign, linked to the strategic goals of enhancing Australia's US alliance relationship and maintaining a "rules-based global order." Actions as disparate as warfighting in Afghanistan, building partner capacity in Iraq and maritime interdictions in the Arabian Sea all link to these same strategic goals. It is likely, however, that this is a convenient historical coincidence. The limited evidence available suggests that such clearly developed campaign planning did not occur at the time (Palazzo circa 2011:458–71; Shearman 2017:27–35).

## The Canadian Armed Forces

Canada maintains a similarly sized military to Australia, yet it faces very different strategic circumstances. Its location immediately north of the USA has isolated it from most potential security threats, while ensuring that its larger southern ally has an enduring self-interest in aiding it in the rare event that its security is threatened. As a result of this situation, Canada was once described as "a fireproof house, far from the sources of conflagration" (Dandurand, quoted in: Morton 1999:176), and its government has been able to pursue a highly discretionary defense policy. This has often led to limited defense budgets and regular changes in declared strategy. Despite this, Canada frequently deploys its military as part of either UN- or US-led multinational forces (Morton 1999:225–94).

In light of its strategic context, the CAF differs from the ADF in that its adoption of operational art was more closely linked to perceived cultural affinities with the US military than it was to interoperability considerations, despite the benefits yielded by the latter. In making this observation, it must be noted that interoperability considerations were not dismissed. On the contrary, they seem to have been taken for granted to the extent that they were assumed rather than being explicitly discussed in the CAF decision-making process leading to its adoption of operational art (Coombs 2010:19–27).

The CAF also differed from both the ADF and the US military by incorporating operational art into its PME programs before its doctrine. The CAF's decision to include operational art in its PME programs occurred in 1987. A protracted debate followed regarding which part of the CAF ought to develop the doctrine to accompany these programs, and what the doctrine's content ought to be. Regarding content, interoperability with the US military was always a point of consensus, to the extent that one of the options considered was using American doctrine in lieu of developing a Canadian equivalent. In the end, Canadian joint operational doctrine was promulgated in 1995 and land force operational doctrine in 1996. Both were very similar to their American equivalents (Coombs 2010:20–25).

Much more than their ADF counterparts (with the notable exception of: Evans 2008:105–31), Canadian military personnel have been willing to criticize operational art's suitability in the Canadian (and, by extension, small military) context. These criticisms broadly fit into two categories. The first claims that operational art does not suit the CAF as Canada's small contributions to allied operations generate a direct strategic/tactical interface, in which tactical presence is more important in achieving strategic objectives than are tactical actions (Vance 2005:271–91). A variant of this argument is that peacekeeping operations specifically require a highly centralized degree of decision-making, creating a version of this direct strategic/tactical interface (Coombs 2004:6; Dickson 2004:32). The second category claims that the introduction of operational art within the CAF has not led to the sequencing of tactical actions to achieve strategic goals, but instead to the "tactification" of operational art concepts, wherein new terminology associated with operational art is applied to describe preexisting tactical actions. The adoption of a "manoeuvrist approach" during the 1990s has been cited as an example, with this approach being applied on a sufficiently small scale that it described combined arms tactics, rather than prompting the practice of operational art (Dickson 2004:12–5).

Encouragingly, these criticisms seem to have been a catalyst for further development of operational art concepts in the Canadian context (for example, see: English et al. 2005). This development has independently yielded a similar outcome to the ADF's conceptual development: the CAF has embraced a functional approach to operational art, though it has not been explicitly labelled it as such. Instead, CAF doctrinal divergence from the US military has been subtle. Perhaps due to the dominance of multinational operations in the CAF's experience, the CAF's doctrinal definition of "the strategic level" is "that level at which a nation *or group of nations* determines national *or alliance* security objectives" (Vance 2014:19, emphasis added). Canadian operational art may therefore contribute to achieving multinational rather than Canadian

strategic objectives. Put another way, CAF operational art can be divorced from Canada's supposed direct tactical/strategic interface, providing that the CAF's tactical presence contributes to achieving the strategic objectives of its allies.

Delineation between "operational art" and "the operational level" has also caused conceptual issues within the CAF, in a similar way that it has within the US military and ADF (Vance 2014:9–11). This confusion has been mitigated to an extent by the standing-up of explicitly operational level headquarters, most recently Canadian Joint Operations Command, which has the same global scope of responsibility as its ADF equivalent (Johnston et al. 2014:6–17).

The Canadian campaign in southern Afghanistan from 2006 to 2014 was a watershed for the CAF's development of its own conceptualization of operational art. Over the course of this campaign, the CAF not only refined its operational art but also the accompanying command structures and organizational processes. In addition to developing a campaign planning process, the CAF developed systems for conducting assessments and for issuing strategic and operational orders. These were developed in such a way as to enable multiagency participation (Coombs and Gauthier circa 2011). At its height, the CAF's campaign in southern Afghanistan involved a force of only 2500 personnel. CAF reforms undertaken in relation to this campaign highlight applicability of a functional approach to operational art within a small military context.

## The Nordic and Baltic Militaries

Although Australia and Canada face different strategic circumstances, their military histories are nevertheless similar (Blaxland 2006). But what about other small militaries that have different histories or which face radically different strategic situations? To address this, the final case study examines a group of small militaries: those of the Nordic and Baltic countries (Norway, Sweden, Finland, Denmark, Estonia, Latvia, and Lithuania). (The other Nordic state, Iceland, is not included in this analysis as it does not maintain military forces at all.) To cover this scope, only a brief account of each military is presented, and some nuances are overlooked. The resulting generalizations are acceptable in light of this chapter's narrow focus on operational art.

Before 1991, the Nordic and Baltic countries were on opposite sides of the Cold War's front line. The Baltics, which were incorporated into the Soviet Union, came under the influence of its military thinking and their own conceptual development cannot be separated from the Soviet operational art tradition until after their independence (Kipp 2011:87–90). The Nordic states were divided as they are today between Norway and Denmark, which were founding members of NATO, and Sweden and Finland, which are not NATO members. While all four focused on territorial defense against the Soviet Union, this divide resulted in subtly different approaches. While the need for collective security was acknowledged by all, Norway and Denmark prepared to achieve it within NATO's broader alliance framework, while Sweden and Finland did so locally (Forss and Holopainen 2015:6–19).

During the early 1990s, participation in UN peacekeeping operations increased in prominence for all of the Nordic militaries. Following the NATO takeover from the UN in the Balkans in 1995, their focus switched to participation in NATO operations, something that continued in Afghanistan and then other places after 2001. Like Australia, enhancing their alliance relationships with the USA has been a major strategic objective for this participation (Wilkens 2016). Although Sweden and Finland are outside of NATO, both have participated in several NATO operations. A point of divergence exists, however, with Sweden participating in a greater number of NATO missions and to a greater extent. Doeser has explained this difference in terms of strategic culture, arguing that Sweden places more emphasis on collective defense and less on territorial defense than Finland (Doeser 2016:284–97). Resulting high levels of Swedish participation in NATO operations have led to speculation that Sweden and NATO are coalescing into a single security community (Wagnsson 2011:585–603), while Finland maintains a more independent approach. Nevertheless, both militaries have needed to operate with NATO despite their nonmember status.

Regaining their independence after the Cold War, the Baltic states underwent several military reforms in the lead-up to being granted NATO membership in 2004. These included establishment of civilian-run defense ministries, adoption of legal frameworks to ensure democratic control of the military, and implementing military professionalization programs that met NATO standards (Trapans 2005:51–70). This latter reform included adoption of NATO doctrine and the establishment of a Baltic Defense College to deliver PME programs, including courses on operational art that align with the American tradition (Trapans 2005:58).

These actions, combined with general societal rejection of previous Soviet influences within the Baltic states, have pulled the Baltic militaries completely away from the Soviet operational art tradition. This starkly contrasts with the small militaries of some other post-Soviet states, which remain within the Russian sphere of influence and continue to apply conceptualizations of operational art influenced by the Soviet tradition. Instead, the Baltic militaries today have more in common with their Nordic neighbors. Like these neighbors, the Baltic militaries participated in NATO operations in Afghanistan and now focus on interoperability within the NATO context (Socor 2005; Latvian Ministry of Defence circa 2012).

For the Nordic and Baltic militaries, interoperability concerns are more nuanced than they are for the ADF and CAF. For Australia and Canada, geography and history have rendered interoperability with the US military of paramount importance. For the Nordic and Baltic militaries, interoperability with their US ally is vital, but interoperability within NATO and with one another is also important (Møller 2019:235–56; Lundqvist and Widen 2016:346–73). This multiplicity of interoperability concerns is a pragmatic response to their geographical position next to both each other and a potentially hostile larger neighbor (Russia). Their geography has therefore had the opposite effect to Canada's geography. For Nordic and Baltic militaries, interoperability concerns outweigh the cultural reasons that primarily drove the CAF to adopt operational art.

Motivations aside, the manner in which the Nordic and Baltic militaries adopted operational art has much in parallel with both the CAF and ADF. Similarities include: dual adoption of “operational art” and “the operational level,” and the resolution of resulting conceptual tensions through the establishment of operational level headquarters such as Norway’s Joint Operations Headquarters and Sweden’s Joint Forces Command; an emphasis on jointness and the promulgation of joint operational doctrine (Slensvik and Ydstebø 2016:297–314; Finlan et al. 2021:356–74); and development of a functional approach to operational art that de-links it from its originally intended scale. For example, Slensvik and Ydstebø observed that “operational art became a functional tool for strategy” within Norwegian joint doctrine. Although derivatives of the American operational art tradition are dominant within all Nordic and Baltic militaries, Slensvik and Ydstebø (2016:303) noted some minor points of alignment with the Soviet tradition in Norwegian doctrine.

In addition to maintaining professional (read: volunteer) militaries that contribute to collective defense and participate in NATO and other multinational operations, all Nordic and Baltic states except Latvia also maintain conscript forces and national reserves as a contingency for territorial defense in the event of a major war (Veebel and Ploom 2019:415). This situation has resulted in operational art being viewed as more applicable in certain situations, a position that differs from both the ADF and CAF, which view it as universally applicable. For the Nordic and Baltic militaries, interoperability is their key reason for adopting operational art. If operating in direct defense of their own territory in a situation where they had to rely on their conscripted and reserve forces, it is unknown whether they would seek to apply operational art or not. Instead, it is possible that they may have to resort to conducting protracted insurgencies against much larger invading forces (Langvad 2014:13–5; McKew 2018).

This highlights an additional consideration for small militaries that adopt operational art. Ultimately, their size will always be a limitation, even if their conceptual rigor far exceeds that of their larger adversaries. Theoretically, there is likely to be a threshold of relative size beyond which more effective application of operational art no longer matters. As Stalin (in)famously put it, “quantity has a quality of its own.” Even if their practice of operational art is brilliant, small militaries facing much larger adversaries will ultimately have to choose between annihilation, surrender, or resorting to unconventional means such as waging an insurgency. Unlike the ADF and CAF, the Nordic and Baltic militaries have had to actively consider these possibilities, particularly in light of the recent Russian resurgence (McKew 2018).

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## Summary

This chapter has investigated why and how several militaries that are too small to employ operational art at the scale it is traditionally conceived have nevertheless adopted it. Regarding the reasons for this, two are apparent. Foremost are interoperability concerns. While this is unsurprising, the second reason is less obvious:

small militaries see themselves as part of transnational “communities of practice” that also include their larger allies. When their larger allies embrace new concepts such as operational art, smaller militaries follow suit due to perceived cultural connections as well as due to practical interoperability concerns. The relative weighting of these factors varies, with the case studies examined indicating that it is influenced by national strategic circumstances, particularly the relative proximity of both larger allies and potential adversaries.

Regarding how small militaries have applied operational art, several consistencies are evident in the case studies examined, regardless of their different military histories and national strategic circumstances. The most significant similarity is that small militaries have developed functional approaches to operational art, which de-link the concept from the scale for which it was originally intended. These functional approaches have been accompanied by other commonalities, most of them derivatives of the American operational art tradition. First, the idea of an “operational level” has also been adopted. This has subsequently been linked to newly established operational level headquarters, which are similar in function to US Combatant Commands but which usually differ by having a global rather than regional focus. Second, small military operational art tends to be joint rather than single-service in nature. Differences between the case studies examined have tended to be minor, for example, whether operational art was first incorporated into PME programs or into doctrine. These differences, while historically interesting, have not substantially altered the manner in which operational art has been applied.

In closing, one question remains to be answered: has the small military adoption of operational art been worthwhile? To answer this, one must return to the strategic objectives of their parent states. In each of the case studies examined, contributions to multinational operations have been a means for establishing closer relationships with larger allies, the USA in particular. This is a key strategic objective for the countries examined because of the potential benefits that come with such a relationship, including enhanced information sharing arrangements, potential political benefits such as enhanced national prestige, and perhaps most importantly, enhancing the prospects that their larger ally will come to their aid should their own national security be threatened. The interoperability enabled by adopting operational art has contributed to achieving this strategic objective. For this reason, adopting and adapting it has been worthwhile.

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## Cross-References

- ▶ [Joint Operations](#)
- ▶ [Land Operations](#)
- ▶ [Military Organization](#)
- ▶ [Military Training, Education, and Socialization](#)
- ▶ [Strategy and Doctrine](#)
- ▶ [What is Military Operations?](#)

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# Evolution of Military Design

Jason Trew, Ben Zweibelson, and Daniel Riggs

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## Abstract

The origins of design are linked to humanity’s strategic ability to leverage imagination for advantages. Furthermore, the link between the design discipline and security affairs is reinforced by how design (in its various forms) co-evolved with military art and science. Their tangled relationship is particularly evident during the so-called modern period in which design became its own discipline, when military power and industrialization melded into the new character of politics, and all of it was reflected in the shifting character of warfare.

J. Trew

Air University, U.S. Air Force, Maxwell Air Force Base, AL, USA  
e-mail: [jason.trew@au.af.edu](mailto:jason.trew@au.af.edu)

B. Zweibelson

United States Space Command, Colorado Springs, CO, USA  
e-mail: [ben.zweibelson.1@usspacecom.mil](mailto:ben.zweibelson.1@usspacecom.mil)

D. Riggs (✉)

United States Army Special Warfare Center and Schools, Fort Liberty, NC, USA  
e-mail: [daniel.p.riggs@socom.mil](mailto:daniel.p.riggs@socom.mil)

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## Reimagining Design

Military design has emerged as a significant field for design research, with surprising connections to the larger design environment. . . It is one of the few fields in which working practitioners share their thoughts widely. . . This makes military design one of the most open and accessible bodies of work by design thinking practitioners. (Ken Friedman, editor, *She Ji Journal of Design, Economics, and Innovation*)

Come with me and you'll be in a world of pure imagination. Take a look and you'll see. . . into your imagination. (Gene Wilder as Willy Wonka)

Design is an innate capacity some have honed into an interdisciplinary profession, distinguishable from art and science, but accessible to all by virtue of humanity's evolved fitness for navigating and nudging a dangerous and disorderly world. And while the world has always been “wicked once over,” a cauldron of increasing complexity and competition over the last two centuries has forged new forms of design (Trew et al. 2022, pp. XX-XX).

Whether military design should be considered one of these branches or if its origins lie much deeper in the design “family tree,” it is undeniably a part of design today. Yet, it is often ignored. This oversight does not just create an incomplete picture, oblivious to how military designers continuously sharpen the discipline; it distorts the very nature of design. In other words, addressing complexity and disorder without attending to the competitive, dangerous aspects that are ever present twists what design has been, what it has become, and what it could be. Nevertheless, this omission occurs even among the most vocal proponents of reimagining design; those who otherwise advocate, for example, “fluid, evolving patterns of practice that regularly traverse, transcend, and transfigure historical disciplinary and conceptual boundaries” (Rodgers and Bremner 2017, pp. 1–2). This chapter is as useful as a corrective to such narrow perspectives as it is to defense professionals who sense that design can help realize competitive advantages.

This narrative begins by briefly sketching the strong bonds between warfare and design that existed before the Industrial Revolution. At that historical juncture, their interdependence is examined in more detail, with heavy emphasis on the evolution of military design over last few decades.

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## Brains, Bonds, and Bards: The Prehistoric to the Premodern

Some civilian designers – the few that even acknowledge military design – find the link between design and warfare to be problematic or even abhorrent. Yet, because the origins of design lay in humanity's capacity for abstraction, they are inherently

connected. Imagination, played out in integrative and expedient ways, not only conceives of ways to prevail over others but also is responsible for the very conditions that nurture violent competition.

One of the central themes in human history is the scale of community. Broadening abstractions of identity – a product of imagination – enhanced social bonds, enabling human organization to move from clan to tribe to city to the “imagined community” of the modern nation state (Harari 2018, pp. 31–37, 171). As expanding groups competed for influence and resources in a dangerous and competitive world, warfare became one mechanism employed to survive and thrive. In turn, the ways humans use organized violence to secure themselves and what they value is an ever-present influence shaping design.

First, consider the artifacts commonly associated with humanity’s heritage as *homo faber* or “the making animal.” Stone tools were designed to manipulate materials, but also can be wielded as weapons. There is a similar duality in weaving branches together, another example of early technology. What could form artificial shelter could also be employed as defensive structures or even traps to imprison. In fact, the word “trap” is semantically linked to “design” (Flusser and Cullars 1995, p. 51). “Design” and “technology” are also linked – linguistically and logically.

“Technology” comes from the Greek word *techne* (itself based on an Indo-European word for fabricating, especially the interlacing of branches). Greeks prior to Plato used it to convey the know-how of the craftsman more than the effect that it produced (Roochnik 1998, p. 17). Technologies, and the technical knowledge to realize them in mind and material, are always simultaneously shaping and being shaped by social forces. To wit, civilizations facilitated novel levels of specialization in woodworking and stone craft and other trades (though to honor the recurring theme of interdependence, note that causality also ran the other way: specialization enabled civilization). Social structures are, of course, in a similar interdependent relationship with warfare. To support a civilization’s elite, for example, individuals with mastery of a craft (*techne*), now included a new type of specialized laborer, the dedicated soldier. Furthermore, even “civilian” innovations manufactured by “armies” of workers, such as roads, enabled military mobilization and the expansion of empires.

Finally, the story of design and security is not limited to examples of physical creations or organizational schemes. The origins of design are in the species’ capacity for abstraction; design is about *becoming aware of possibilities* to enable changes in the physical world. Imagination is a strategic skill because it enables one to realize advantages mentally before attempting to do so materially (Trew et al. 2022, pp. XX-XX). A direct example is the *strategos* (Greek general) employing their *techne* by devising operational maneuvers.

Another, more indirect, manifestation of the gift for imagination is the ability to make sense of – and influence – the world through stories. In ancient society, for example, the ideals of leadership and craftsmanship portrayed in Homer’s epics highly influenced Greek civilizations spreading across the Mediterranean Sea. *The Iliad* and *The Odyssey* not only centered on warfare but also showcased characters using their imagination to design maneuvers or telling stories to foster strategic

advantages. The doubly crafty Odysseus, for example, exemplified the cunning strategist and technical innovator, as evidenced in the Trojan Horse. Indeed, the audience comes to know Odysseus's skills because his character is the one narrating most of these stories, which he is telling in hopes of gaining assistance for his journey home. How Homer's story is interpreted by later readers is equally useful for understanding changing conceptions of design and security. In Roman culture, Odysseus became an untrustworthy, treasonous *trickster* (Virgil 1994, pp. 24–28) (both crafty and trickster are related to the etymology of design).

In contrast to Athens' messy pluralism, Rome's empire was built upon principles of centralized power, rational administration, and monolithic ideology (Burbank and Cooper 2011, pp. 34, 38–42). The imperial model worked well until the fifth century CE, when chaos at the empire's edge created an overwhelming centrifugal force that Rome could no longer contain. The political landscape shifted and, as a result, the Catholic Church expanded into areas previously handled by Rome – including military affairs. The religious influence on medieval militaries strengthened some existing ideas (obedience to a centralized hierarchy) and introduced new ones (sanctified justifications for political violence). It also primed the Western military mind for dogmatic adherence to hallowed doctrine.

Doctrine and dogma, as words and concepts, existed prior to the Roman Empire. What shifted in the Middle Ages was the sense of mystical revelation as a dependable source of knowledge, including guidance for military matters. Reason, of course, was not excluded (just as Romans themselves entertained the supernatural). Still, the medievalist's appeal to spiritual inspiration was reminiscent of *métis*, which was literally taken from the Greek goddess of that name and implied divine intervention on behalf of a mortal. Much like *techne*, cultural appreciation of the goddess of strategic wisdom waned as a result of Plato's disrespect for craft knowledge and tacit intelligence (Letiche and Statler 2005, p. 3). The philosopher's preference for objectivity and rationality would again dominate in the wake of another inflection point in European history.

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## Modernity Emerges

The early modern period of European history is marked by multiple significant changes, neatly captured in historiographical labels of the period: the Age of *Reason*, the Age of *Discovery*, and the *Scientific* Revolution. Plato's ideas about rationality, order, and control were “reborn” in the Renaissance; the authority of the Roman Catholic Church was curtailed by the Protestant Reformation; and the Peace of Westphalia institutionalized the sovereignty of states as well as their exclusive rights to political violence, a right they regularly invoked.

Not only did states conceive of geopolitical security in new ways, but they also altered designs for securing advantages. Ideals of strategy progressed further from classical conceptions that would have been recognizable to Homer, the sophists who recited him, the generals and admirals who emulated his heroes, and the master craftsmen who – like military leaders and their sophist tutors – also embodied

cunning intelligence. Instead, modern era militaries turned increasingly towards rationality, professional experts, and the opposite of *métis*: brute force.

This new character of war became its own engine of change. According to historian Azar Gat, military competition among European states “played a central role in propelling forward the process of modernization” (Gat 2006, p. 495). One example is how designing for military advantage fed into the biggest inflection point in the history of design, the Industrial Revolution.

Industrialization changed design, which served a role in mass production as well as its management. In both cases, the story’s setting is the factory. This system was predicated on replaceable parts. And that innovation was first pioneered in the design and manufacturing of weapons (Smith 1985, pp. 46–78). Firearms actually offer a useful thread to continue tracing the intertwined histories of design and warfare.

A broad-ranging, strategic example is firearms. The widespread use of such weapons started in twelfth century China and then diffused westward across the Mughal, Safavid, and Ottoman empires in the fifteenth, sixteenth, and seventeenth centuries. This “gunpowder revolution” then intensified in the competitive political environment of post-Westphalian Europe and the intellectual atmosphere of the Enlightenment. Technology is never just about the physical artifact, however. Along with new weapons came innovations in the way resources were managed and how leaders organized and employed forces. In other words, an entire technological system emerged to help realize advantages in a world now competing, economically and otherwise, on a global scale. Consequently, eighteenth century European powers aggressively undertook the “bureaucratization of violence” (foreshadowing similar changes in nineteenth century commercial management) (McNeill 1984, pp. 144, 156–162).

There is also a tactical dimension of the firearms story. Drill, the “rehearsal of prescribed movements,” existed even before Plato’s lifetime but took on greater prominence as states entered the modern era (*Military Drill*, Britannica n.d.). Complicated procedures for loading and firing, the requirement to offset inaccuracy with disciplined volleys of fire, and the need to organize a greater number of people involved in these operations all necessitated new levels of precision and efficiency. It also required increased control, reminiscent of Platonic logic that (lower class) individuals should heed whatever the experts tell them. Notably, these technical requirements co-evolved with similar cultural tendencies for centralized, bureaucratic management of human activities and a military leadership grounded more in competence than birthright.

These two examples stretch across a spectrum with geopolitical competition at one end and battlefield tactics at the other. In between, another important development materialized, feeding off the emerging inclinations to codify knowledge into doctrine and prioritize performance over social status. In fact, historian William McNeill identified this innovation as “one of the major achievements of the 17<sup>th</sup> century, as remarkable in its way as the birth of modern science or any other breakthroughs of that age” (McNeill 1984, pp. 133, 68, 123–124). He was referencing a newly formalized domain of knowledge: the use of engagements to

achieve the ends of war. Today this innovation is referred to as “military art and science.”

At first glance, this phrase may indicate a clear reference to what the novelist and scientist C. P. Snow referred to as the “two cultures,” art and science. In truth, it highlights the ambiguity of the former. “Art,” in one sense, is expressive, subjective, and attuned to aesthetics (Trew et al. 2022, pp. XX-XX). Yet, the way the word is often used, especially in numerous works on military matters, is actually synonymous with design. The Greek *techne*, which is the etymological forebear of “design” and embodies many of the characteristics (e.g., expedient, integrative, embodied, crafty) – continued in Western culture as the Latin *ars*. According to the philosopher Vilem Flusser, its connotations include flexibility, twisting, cheating, manipulating, illusion, and conjuring. The prefix “art-” is derived from *ars* and is used in words related to a ruse (“artifice”), falsehood or something designed (“artificial” can be used for both), and mechanical engines for projecting large munitions (“artillery”) (Flusser and Cullars 1995, p. 51). The last example is particularly relevant for this historical sketch as it continues to show how, instead of relying upon brute force, advantage in warfare can be *designed*.

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## Emergence

Scholars who study complexity cleverly note that “more is different.” In other words, interactions among increasing numbers of subordinate components can create novel, “emergent” behaviors (Anderson 1972) especially when operating with few or loose constraints. Hence, complex systems are capable of becoming more than the sum of their parts (which is what distinguishes the *complex* from the *complicated*). Warfare in early modernity was clearly one example in which quantitative developments produced qualitative transformations. First, consider an obvious component, weapons. While projectile weapons have, like military drill and formation, existed for much of the history of warfare, the design and manufacturing of firearms intensified in the modern era. Simply put, more people had access to more destructive weapons. This increase in capacity and availability, coupled with the disorder in a wicked world, enabled a dangerous and disparate collection of emergent phenomena.

What is particularly relevant for this chapter is how closely developments in artillery (and countermoves in engineering to strengthen fortifications) are particularly associated with momentum towards an “art” of war that is based in science, or at least scientific approaches. “The ideal of Newtonian science excited the military thinkers of the Enlightenment,” Gate notes, “and gave rise to an ever-present yearning to infuse the study of war with the maximum mathematical precision and certainty possible.” This urge reached new levels with the “cold-blooded mathematicians” of French artillerists of the eighteenth century. Their aptitude for rigorous aiming calculations and regimented firing procedures – an extension and intensification of earlier small-arms drill – served France well when revolutionary activity



and then external threats necessitated a mass influx of inexperienced soldiers (McNeill 1984, pp. 171–173, 191–192).

In the spirit of the times, some attempted to translate the emerging character of warfare into enduring, rational principles. Baron Antoine-Henri de Jomini, influential in his time and still assigned in war colleges around the West, is a prime example. One of his many works, *Art of War* (1862), sought to use his firsthand experience of the Napoleonic Wars “to make instruction easier, operational judgment sounder, and mistakes less frequent.” Jomini went on to write, “these rules thus become, in the hands of skillful generals commanding brave troops, means of almost certain success. The correctness of this statement cannot be denied” (Jomini 2008, p. 247).

French victories at the turn of the nineteenth century, however, cannot be solely explained by material designs or systemized knowledge. Again, design is fundamentally about imagination and abstraction, and is a strategic skill that creates the conditions for warfare as well as the means to prevail in it. Myths matter, strategies are essentially stories, and, in the case of Napoleonic warfare, culture can enable creative adaptations. French nationalistic fervor, for instance, supported the enlistment of the entire nation (*levée en masse*). How those armies were employed also relied upon those same subjective elements. Motivated troops moved faster and deserted less, which enabled aggressive tactical actions and strategic concentration. Some even suggest Napoleon’s success was due, despite his background in artillery, to how he could creatively and intuitively improvise battlefield operations (Morillo et al. 2008, pp. 430–432).

Design conferred material and mental advantages onto the French forces. Those who suffered defeat by Napoleon’s *Grand Armée* were primed to consider new ideas and thus began redesigning their own ways of warfare. Prussia was uniquely open to reform in the aftermath. Over the course of the next century, the state institutionalized innovations in military art and science that would have widespread influence on design even into the twenty-first century.

Among Prussia’s reforms was the creation of a General Staff and their “modern” approach to planning campaigns (the origins, in some accounts, of today’s military design). Prussian staff officers strove to “systematically apply reason and calculation to all aspects of army administration and operations” (McNeill 1984, pp. 216–218). By the mid-nineteenth century, they faced an increasingly complicated technological landscape. Indeed, innovations in transportation, manufacturing, and communications – and the managerial revolution that accompanied them – created new expectations of modern-era warfare. Judged against Prussia’s regimented design for war, the US Civil War served as an example of what *not* to do. Neither side, muddling through what was arguably the first industrialized war, was able to achieve “professionally efficient management” of political violence (McNeill 1984, pp. 242–243). On the other hand, Prussian Chief of the General Staff General Helmut von Moltke – oft-cited for his definition of strategy as “a system of expedients” – offered a compelling counter example. His victories in the 1860s and 1870s seemed to definitively prove the value of detailed planning. Thereafter, his rationalized approach became an exemplar for the other armed forces of the West. Those militaries enabled near-global dominance during an age of imperialism, which

further strengthened a sense of progress, faith in technology, nationalistic identity, and techno-rationalistic way of design.

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## **World War One: “The War to End All Wars”?**

From the opening moments, the First World War was a display of the prowess of modern military planners. Complicated railroad synchronization schemes and mobilization timetables informed German plans to tackle a two-front war. By defeating France quickly, they predicted they could pivot east before Russian forces organized themselves. The “Schlieffen Plan” (named after the successor to von Moltke) was solidified as early as 1893, updated yearly, and modified for execution in 1914. From the perspective of recent criticisms of linear planning, “the irrationality of rational, professionalized planning could not have been made more patently manifest” (McNeill 1984, p. 306). This insight was, however, unappreciated at the time, and rationality was assumed to be the most important way to secure advantages.

On the domestic front, “design” was integral to both corporate management and industrialized production, which worked in tandem to mobilize national industrial enterprises and deliver new levels of devastation. In fact, the war generally drove a “managerial metamorphosis” as home fronts supported front lines with manpower and material that was produced and transported in the most efficient means possible (Morillo et al. 2008, p. 443). One indication of their “success” was the ability to overcome natural restrictions to fighting that had historically constrained war. In the past, economic, social, and geographical factors set limits on warfare. Land-based economies struggled to fund armies or tolerate the absence of their working force or to even sustain long distance deployments. Modernized warfare, however, was not as susceptible to limits on communication, the liabilities of animal power, or seasonal variations. Humanity had little experience with processing such sustained and intensified trauma, which leads to yet another example of how war has influenced design.

After WWI, a despondent German – not unlike Plato in his disappointments and ambitions following Athens’ defeat – hoped that “through a new art, a new order could be created.” Walter Gropius went on to found the Bauhaus School, which was highly influential in promoting the “unification” of design fields and the mass production of functional, bold artifacts. The design school was so influential across Europe that a suspicious Nazi regime, fearful of any potential threats to their power, pressured it into closing on the eve of the next world war (Droste 2019; Gossel 2019).

The fact that there would be another world war revealed the hubris of labeling the previous conflict as the “war to end all wars.” It was as if the volatile mixture of violence and chance could be controlled by reason, the third element of Clausewitz’s “wondrous yet paradoxical trinity” that characterized the nature of war (Clausewitz was considered too abstract to be read by practitioners) (Cole 2020, p. 42; Murray et al. 1996, p. 4). Still, the label reveals something of the spirit of the time, including

a reverence for rational, comprehensive, and objective predictions of a future that persistently resists such taming.

Even before WWI, the Prussian General Staff model replicated throughout Western society and was especially prominent in civilian management. Corporations designed hierarchical structures exercising “command and control” over individuals who were no more than “cogs in the machine.” WWI did nothing to slow these trends. As Freedman notes, “behind the enthusiasm for the new engines of war... was a modernist fascination with the possibility of a rationalist, technocratic super-efficient society built around machines” (Freedman 2013, p. 126). The next world war was even more dependent upon linear thinking, attempts at comprehensive modeling, quantitative analysis, bureaucratic structures, and logistical efficiency (Bousquet 2009; Paparone 2017). Again, it was not just practical issues that gave credence to overly rationalized design and metaphorical images of organizations as machines; there was a supportive sociocultural perspective as well.

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## Postwar Designs

WWII military art and science generally achieved the intended effect. To be sure, many of the challenges were well-suited for the rationalized way of design. Planning convoy defense routes, the invention and use of radar, and the Manhattan Project are all well-known examples amenable to linear planning, compartmentalization, and scientific precision. A lesser known, and even more appalling example is how the Nazis tackled the complicated problem of genocide. In order to efficiently transport Jews from “right out of a boxcar and into a waiting gas chamber,” IBM provided thousands of punch-card machines (precursors to computers) (Black 2012, p. 9). Design, as its etymology reminds us, certainly can be twisted.

After WWII, warfare continued to influence design. Innovative approaches to solving complicated problems, such as operations research, seemed to contribute so much to Allied victory that “technocratic” approaches were applied to other issues, such as atomic energy and space exploration. Of course, not all problems responded to such logic. Literacy, poverty, and a host of other dilemmas did not improve and sometimes even worsened with the application of mechanical mindsets and management practices showcased in WWII. This class of problems became known as “wicked problems,” a phrase coined for the very purpose of highlighting the absurdity of importing “best practices” from *complicated* military operations to address *complex* social messes (Rittel and Webber 1973, pp. 155–169; Snowden 2020). While the limits of this approach became increasingly evident to (some) civilian designers, geopolitical tensions kept Western militaries firmly focused on rational approaches.

During the Cold War, the high stakes of nuclear conflict meant that civilian strategists were now making decisions on military strategy. They brought along their training in social sciences (especially economics), analytical approaches (including operations research), and a “hyper-rationalist belief in control.” Many came from the RAND Corporation, a think tank captivated by a techno-rational

approach to designing advantage. Consequently, they rejected anything close to the virtues of warfare personified by Odysseus. With their “insouciant disregard” for conventional military *techné*, they put their faith in quantitative methods and game theory. Deterrence or victory would come through “rationalizing our choices and increasing our control over our environment” (Freedman 2013, pp. 190, 145–150). While traditional military art and science may honor, or at least reference strategic vision from *métis* or *coup d’œil* (“stroke of the eye”), such tacit, intuitive, and spontaneous wisdom was presumed unreliable by these “whiz kids.” Wars could (supposedly) be planned, executed, and reliably won only through the brute force of pure mathematical precision and prediction.

Eventually, military leaders were encouraged to adopt the same paradigm. “Desk bound and far from the scenes of actual conflict,” Freedman writes, they became “as proud of their degrees in business administration and economics as they were forgetful of the ways of military strategy” (Freedman 2013, pp. 199–200). Tellingly, this is also when political scientist and presidential advisor Samuel Huntington popularized the idea that professional military officers are the “*managers of violence*” (Huntington 1981, p. 32).

Robert McNamara, mentioned in “Roots of Military Design: Designing Advantage,” continues to serve as a telling example of these shifts. As previously stated, he taught at Harvard’s business school and eventually entered the corporate realm. For rhetorical effect, the narrative deliberately omitted his military connections: during World War II, he left his faculty position to serve as an Army Air Corps statistician, and he ended his tenure at Ford Motor Company to become President Kennedy’s Secretary of Defense. In that later role, he was the “epitome of the rational strategic man in his mastery of . . . analytical techniques” (Freedman 2013, p. 149).

McNamara recruited many from RAND to join him in Washington, DC. Together, they would promote an antiheroic, managerial, and objective approach to designing advantages in war. Within two decades, however, the limits of McNamara’s corporate approach were becoming just as obvious in national security settings as similar approaches were in civilian applications. As a case in point, the urge for predictability led to burdensome command and control (C2) procedures that succeeded mostly in increasing dependence upon centralized decision-making and stifling battlefield creativity. Furthermore, the linear, quantitative, materialistic approach was a model for industrialists and economists, not for those seeking to “shatter the enemy’s cohesion, organization, command, and psychological balance” (USMC *Warfighting* 1989, p. 29). Military leaders grew progressively suspicious of the “conformist practices and the risk-averse culture of large corporations” and “the corporatist culture” that had displaced metic wisdom with the myth of objective, intellectual force (Freedman 2013, pp. 199–200).

The US Air Force Colonel John Boyd is a notable example of those who pushed back against “technowar” and is sometimes portrayed as an early military designer. While he did not conceive of himself in those terms, nor did he focus on operational warfare, the “undisciplined” integration of diverse sources certainly hints at his “designfulness” (Trew 2022). And it was not simply his appetite for linking disparate concepts; often the very same ideas are now commonly discussed among both

military and civilian designers: mental agility, bias to action, experimentation, empowering networks, anticipating surprise, leveraging ambiguity, and attention to “orientation” (perceptions, paradigms, narratives, etc.) (Osinga 2006, pp. 19, 32, 86–88, 106). Yet, while Boyd and his fellow reformers drew inspiration from the same ideas influencing the formal design field at the time (e.g., the role of subjectivity and emergence in complex adaptive systems), they also honored military classics. Of course, they often reframed those ideas, yielding, for example, novel perspectives of Clausewitz’s “general theory of friction” (Watts 1996) or his well-known “trinity” (Bassford n.d.).

The fighter pilot-turned-philosopher is an insightful example for other reasons, too. “Roots of Military Design: Designing Advantage” described design as expedient, invoking multiple meanings of that word, and Boyd unapologetically endorsed opportunism (“explore and exploit”), outwitting an opponent, and winning through outright speed. He sensed that advantage – whether in aerial combat or grand strategy – comes from outmaneuvering the enemy in a dynamic, self-reflective process that would become his trademark: “observe, orient, decide, act.” Boyd’s sophisticated ideas quickly became simplified to just two words (“OODA loop”) and shortened to a single graphic (foreshadowing similar modifications to civilian and military design).

While Boyd constantly pushed the boundaries of the status quo, some post-Vietnam reforms simply resurrected old concepts. Specifically, many began to revisit past military designs on the use of tactical engagements to secure campaign objectives. This was construed as something beneath the strategic level of war, the level at which political “interference” seemed unavoidable. The impact was to cordon a field in which professional warfighters could claim exclusive expertise. Hence, in the 1980s, revisions to the US Army’s *Field Manual (FM) 100-5, Operations* were explicit about importing “operational design” and then “operational art” into doctrine. According to a US Army War College report,

[FM 100-5] introduced to the English-speaking world the idea of an operational level of war which encompassed the planning and conduct of campaigns and major operations. . . This conception of an identifiably separate level of war that defined the jurisdiction of the profession of arms was, for a number of historical and cultural reasons, attractive to US practitioners and plausible to its English-speaking allies. As a result, it and its associated doctrine spread rapidly around the world. (Kelly and Brennan 2009, p. v)

The operational level of warfare – which has become ingrained as a sacred truth ever since – was actually based on an extension of Soviet (and potentially German) doctrine earlier in the century. Again, this was when linear rationality dominated most design methods and certainly had mesmerized military organizational decision-making methods (Naveh 1997; Zweibelson 2019). This conception of an operationally focused variant of design would subsequently “spread through the Anglophone world like a virus” and be well ensconced by the time it was put to the test in the first conventional battles since the end of the Cold War (Kelly and Brennan 2009, pp. 61–62).

## **“The Sand Box”**

The interdependent histories of design and warfare reveal that changes in one area are tightly coupled with the other. Unsurprisingly then, operational doctrine co-evolved with great leaps in technologies such as “smart” bombs, space-based surveillance, and robust C2 of air, sea, and land forces. Originally designed for Western militaries to counter the Soviet Union, all were used to great effect against Iraqi forces during the 1991 Gulf War. Overwhelming tactical supremacy – displayed in continuous televised coverage – seemed to certify the contemporary paradigm of operational design. Even the enemy seemed to accommodate doctrine and its unstated dependence upon “freezing the context”; by keeping the tactical situation practically unchanged, designers were free to indulge in comprehensive analysis and complicated planning on their own timeline. When the coalition finally decided to unleash its hyper-advanced forces, it easily overwhelmed an enemy whose tactics and equipment were well known and whose officers had been indoctrinated into the same Western paradigm of warfare.

In the validation of victory, the current state of military art and science lacked any impetus to reexamine its methods or mindsets. For a moment, the triumph restored faith that the methods that brought success in the World Wars were still valid. Consequently, there was no inspiration to follow the trend of other designers toward decentralized and human-centered approaches. To the contrary, doctrine proceeded further down the path of techno-rationalism. Soon there were predictions, such as one from the previous Vice Chairman of the US Joint Chiefs of Staff Admiral Owens, that information age advancements would “lift the fog of war” (Owens 2001). Once again, however, it would become clear that practices from the complicated domain of science and engineering do not transfer to the messy complexity of a doubly wicked world.

The terrorist attacks of 2001 and the subsequent conflicts in Afghanistan and Iraq demonstrated the limits of doctrinal design. A relatively small number of “low-tech” enemies became the anomaly that grew, for some, into a paradigmatic crisis. The entire presumption of objective, scientific ways of warfare seemed questionable, and along with it, the obsession with efficiency, control, and perfect intelligence (McCrystal et al. 2015, p. 20). Around this time the acronym “VUCA” (volatile, uncertain, complex, and ambiguous) gained popularity in military circles and official documents started importing the concept of “wicked problems.” More recently, even the notion of a predetermined end state – central to modern-era planning – has been critiqued as inaccurate and harmful (de Czege 2014).

History demonstrates that innovative thinking is often nurtured by anomalies, frustration, and outright defeat. Amid a struggle against insurgents in the Middle East who were technologically disadvantaged yet “human-centered,” the Western military establishment was once again receptive to new ideas. They would not have to go far.

## From Military and Design to Military Design

Facing complex security issues, with counterinsurgency fights on multiple fronts and globalization challenging Westphalian sovereignty, some security professionals in the West still harbored a hope for technological salvation. Others, however, questioned the entire way of war that had emerged since the Industrial Revolution, including how militaries applied (or misapplied) various manifestations of design. Those more willing to entertain heretical ideas found that a small group within the Israeli military had already begun crafting an innovative approach to operational design.

Much as Boyd had done, and in the integrative spirit of design, this group of radicals engaged an electric array of sources well outside the canon of military art and science. This included sociology, philosophy, and architecture, as well as less obvious sources such as poetry, literature, and medicine (Wrigley et al. 2021). They also examined the same evolving theories of design and organizational management as sketched here and elsewhere (see Trew et al. 2022). What emerged from this strange mixture became a formal design methodology, “Systemic Operational Design” (SOD). And similar to Boyd, they inspired a small, but vocal, counterculture movement.

SOD advocated practices rare in the conventional military paradigm of the West. Their praxis included critical self-reflection, discourse mapping, and visual thinking, and their ideas would eventually “trigger controversy, intense debate, and international intrigue” (Zweibelson 2019, para. 15). Critics decried it as eccentric, disruptive, and even dangerous. Some reacted as if defending sacred laws (Graicer 2017). Proponents, on the other hand, believed the novel approach could help radically reframe how militaries make sense of the operational environment. In their view, adopting SOD’s esoteric mindsets and methods could yield opportunities that traditional military planning was incapable of perceiving, given the strictures of the conventional paradigm. Harkening back to the notion of cognitive agility as a strategic advantage, advocates sensed that SOD was “distinctly Sun Tzu-like in its attempt to outthink the enemy, exploit surprise, and seek asymmetric opportunities” (Blomme 2015, p. 39).

SOD attracted international attention. The main architect, Israeli Brigadier General Shimon Naveh, traveled to the USA to share his ideas. By 2005, he had found fertile ground in the heart of the US Army’s intellectual center at Fort Leavenworth, Kansas. There he taught future planners studying at the US Army’s School of Advanced Military Studies (SAMS). Students, encouraged to repeatedly reframe situations, crafted orders using narratives, metaphors, and graphics instead of stale doctrinal templates (Davison 2006; Lauder 2009). The successful pilot program led to more SAMS courses in SOD, more student papers on the topic, and a self-published text, *Art of Design* (2005).

SAMS is one of a handful of Advanced Studies Groups (ASGs) that are collectively the most intellectually rigorous schools in the US Department of Defense. Each ASG has a particular niche, and for SAMS, the focus – as it was for Naveh and his team – is planning at the operational level of war. Unsurprisingly then, this



particular revolution in design found its way into the US Army publications on operational warfare, as opposed to any number of other military functions that could be “designed” (e.g., logistics, weapons technology, force development, etc.) (Wrigley et al. 2021, p. 109).

The introduction of unconventional ideas into a large institution is naturally difficult because continuity and coherence are the basis of any organization’s culture. Design may be particularly problematic given that it is, at its core, disruptive and, for many defense professionals, counterintuitive (Beaulieu-Brossard and Dufort 2017a, p. 2). Predictably, it proved difficult for SOD-inspired philosophy to gain widespread momentum in the US military and the Army in particular.

By the end of the first decade of the new century, it was evident that a lack of consensus was hampering efforts to nurture a novel form of design in the West’s largest army. By then, two competing perspectives had emerged (similar to the debate over pure design thinking versus Design Thinking, see Trew et al. 2022, pp. XX–XX). For the so-called “purists,” design only works (or works well) if the teams responsible for crafting operations fully embody the postmodernist, playful, and seemingly mysterious practices of SOD. For example, one must not only learn to reframe external situations but also to reframe their own internal, abstract understanding of what is known or even knowable (Ryan 2016, para 27). This required a degree of mental agility, humility, and adventurism that naturally limited who was interested and capable of designing in this spirit. Naveh himself said design “is not for everyone,” and most military officers “will never get it” (Naveh 2007). The crucible of the torturous intellectual journey to the summit was the path to design; awarding participation trophies at base camp was simply inconceivable.

According to Alex Ryan, who himself was a student of Naveh and would go on to teach with him at SAMS, purists were “mostly ignored or derided by Army leaders. For every 100 students, they would convert one or two devoted acolytes, but in the process, they also generated active resistance to design” (Ryan 2016, para 29). In contrast, the “pragmatists” preferred to institutionalize some less controversial elements than to have a bolder stance face complete rejection. Thus, while the SAMS faculty and students produced a dense manifesto laden with exotic theory, doctrine writers rejected it as inaccessible. Following the example of early modern writers who translated (perverted?) the art of military strategy into enduring, rational principles, they distilled 3000 pages of SAMS design material into 13 pages of superficial constructs that never challenged the current paradigm. That was followed by a slim chapter in *FM 5-0* that codified a sequential and rather mechanical “Army Design Methodology” model (Army 2010, p. 1.3).

Like Jomini centuries earlier, the formulaic products offered by the pragmatists successfully influenced the status quo. Still, though design was now part of doctrine, it was shortened, sterilized, and subordinated to the opening steps of planning (see Grigsby et al. 2011). Absent was any sense of design as pervasive or provocative or anything else that purists had found meaningful. Ryan’s observations at SAMS corroborated the results of the dulled version. “Because none of these students were required to challenge their fundamental beliefs,” he wrote, “their design projects simply perpetuated the dominant instrumental approach to problem solving” (Ryan 2016, para. 29).



In 2016, Ryan concluded that neither approach had yet achieved the change they wanted to see in the institution. Almost a decade later, design is still an ambiguous term with an ambiguous reception across the defense establishment. What is clear, however, is that most Western militaries contain at least a small group of individuals who consider themselves to be part of an international military design movement. It is important to note, however, that they are a subset of a larger community of defense professionals engaged with all the uses of design applied to all aspects of security (intelligence, education, logistics, research, etc.). Military design, in other words, is not the same as military and design.

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### **Summary: The End. . . Or Just the Beginning?**

Perhaps the distinction that “military and design” is not limited to “military design” is unnecessary. Perhaps military design, with its attention on persistent innovation, is the means by which militaries can adopt and adapt all sorts of foreign concepts – from art, science, and design – to realize an advantage in violent competitions. Perhaps the movement is not actually hampered by the vagueness of the concept, given the expedient and integrative nature of design (Trew et al. 2022, pp. XX-XX). After all, designers do not wait patiently for perfect clarity, which they know will never come, but instead “perform this little dance around a problem, taking stabs at it from different sides” (Lawson and Dorst 2009, p. 26).

This playful image does appear to capture the current situation of military design, which continues to move and morph (much as Design Thinking has in civilian work). And the movement is expanding in ways that strive to respect the context. In fact, the leading international network of military designers, the Archipelago of Design, is so named to evoke the metaphorical imagery of loosely connected, but independent, islands (Beaulieu-Brossard and Dufort 2017b; Jackson 2018). Indeed, this suggests one final reason why all students of design, whether military and civilian, may benefit from learning more about the emergence and evolution of military design.

Though perhaps it does not represent the totality of how design is used in military settings, military design has been a vector through which “designerly ways” of knowing and acting are spreading around the globe. Numerous publications – including multiple chapters in the *Springer Handbook of Military Sciences* – showcase this trend, with specific “case stories” on how design has altered the way military organizations plan; how it has impacted military education and training; and how it has influenced the ways military members think, talk, and even write. Indeed, this chapter as well as another, “Roots of Military Design,” were themselves intended to exemplify designfulness. For example, they were crafted by a diverse group, some insiders to this movement and some not. Ideas diverged wildly before converging into their final form. The works are consciously *partial* (as in both incomplete and biased). They intentionally use frames that readers (and even other designers) may not be familiar with or even accept: the use of “big history,” the characterization of management theory as a field of design, and a focus on the essence of design instead of what distinguishes military from civilian design (ground

well covered elsewhere by one of the coauthors). As with any history, themes are knowingly smoothed over to clarify the narrative, anachronistic constructs are used (the Athenians would not recognize the label “Greek”), and paradigms are presented as overly uniform (when really there were always contemporary critics). Other frames may be so transparent that they are accepted automatically. Consider the presumptions implicit in terms such as “Middle East” (middle in relation to those who set the discourse), “Industrial Revolution” (which emerged gradually), or “the West” (which assumes a monolithic entity and no small amount of Eurocentrism).

There is one frame that was not used, however. Despite promoting “human-centered design” and mentioning some key individuals by name, the individual designer is a character who has remained in the background. Yet, it is the individual who must answer the call into a heroic journey of learning, who must live into a design practice and who – in dialogue and debate with others – will face the dilemma of designing advantages for a world that is wicked once over.

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## Cross-References

► [Roots of Military Design: Designing Advantage](#)

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